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ATOMIC OXYGEN EXPOSURE OF LDEF EXPERIMENT TRAYS

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**LONG DURATION EXPOSURE FACILITY
MATERIALS SPECIAL INVESTIGATION GROUP**

ATOMIC OXYGEN EXPOSURE OF LDEF EXPERIMENT TRAYS

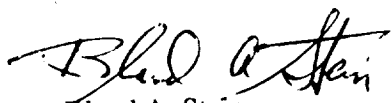
FOREWORD

The National Aeronautics and Space Administration Long Duration Exposure Facility (LDEF) was launched into low-Earth orbit (LEO) from the payload bay of the Space Shuttle Orbiter Challenger in April 1984. It was retrieved from orbit by the Orbiter Columbia in January 1990. The 57 LDEF experiments covered the disciplines of materials, coatings, and thermal systems; power and propulsion; space science; and electronics and optics. LDEF was designed to provide a large number of economical opportunities for science and technology experiments that require modest electrical power and data processing while in space and which benefit from post-flight laboratory investigations of the retrieved experiment hardware on Earth. Most of the the materials experiments were completely passive; their data must be obtained in post-flight laboratory tests and analyses.

The 5.8-year flight of LDEF greatly enhanced the potential value of most LDEF materials, compared to that of the original 1-year flight plan. NASA recognized this potential by forming the LDEF Space Environmental Effects on Materials Special Investigation Group (MSIG) in early 1989. MSIG was chartered to investigate the effects of the long LEO exposure on structure and experiment materials which were not originally planned to be test specimens, and to integrate the results of this investigation with data generated by the Principal Investigators of the LDEF experiments into the LDEF Materials Data Base.

When evaluating space environmental effects on materials and systems in LEO, one of the most important environmental parameters is atomic oxygen. During early Space Shuttle missions, organic polymers and a few metals (e.g.- silver, osmium) in the Orbiter payload bays were found to significantly erode in a few days due to atomic oxygen alone or in combination with other LEO environmental parameters. Specific information on atomic oxygen fluxes and fluences on each of the LDEF experiment trays is required to define the performance of most LDEF materials and systems. Accordingly, MSIG decided to delineate atomic oxygen exposures on each of the side rows and on the Earth and space ends of LDEF to provide the Atomic Oxygen Supporting Data to LDEF investigators for the detailed analyses of their experiments.

This document is the LDEF supporting data which details atomic oxygen fluences on the LDEF experiment trays, prepared by the Boeing Defense and Space Group under NASA Contracts NAS1-18224 and NAS1-19247, "LDEF Materials Data Analysis". The preliminary version of this document, entitled "LDEF Atomic Oxygen Flux and Fluence Data Summary" was distributed to LDEF Investigators in late 1990. This current version is based on a revised determination of the LDEF orbital parameter history and a determination of the fluences on several LDEF rows during a brief attitude excursion of the Space Shuttle Orbiter subsequent to LDEF retrieval and prior to closure of the payload bay doors for return to Earth.



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LDEF
MSIG

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SYMBOLS

$\langle c \rangle$	Average molecular speed, cm/sec
c	Molecular speed, cm/sec
F	Atomic oxygen flux, atoms/cm ² -sec
G	Maxwell's speed distribution function
H	Solid angle distribution function
M	Molecular weight, g/g-mole
N	Number density, molecules/cm ³
R	Universal gas constant, ergs/g-mole-K°
T	Absolute temperature, K°
u	Absolute value of the component of relative velocity of a molecule perpendicular to an exposed surface, cm/sec
U	Normalized speed of advance, dimensionless
v	Spacecraft orbital speed, cm/sec
α	Angle between the normal to an exposed surface and the spacecraft ram vector
β	Angle between the velocity vector of a molecule and the normal to an exposed surface
π	Value of pi, 3.14 . . .
ω	Solid angle, steradians

1. INTRODUCTION

When atomic oxygen collides with a spacecraft surface traveling at relative velocities of 7-8 km/sec, the collision energy is 4-5 eV. At this energy, atomic oxygen may initiate a number of chemical and physical reactions with the materials of the surfaces with which it collides. These interactions contribute to material degradation, surface erosion, and contamination. Knowledge of atomic oxygen fluence on exposed surfaces is important in design of spacecraft. Interpretation of the effects of the space environment on exposed material requires quantitative knowledge of the atomic oxygen environment. Calculations to determine atomic oxygen fluences on the experiment trays of the Long Duration Exposure Facility (LDEF) are described herein.

The geometry and coordinate system of LDEF are shown in Figure 1. The vehicle is a 12-sided structure 30-feet long and 14-feet in diameter. In orbit, the long axis of the vehicle pointed away from the earth. The coordinate system as indicated in the figure is right handed. The z-axis and vehicle heading are nearly coincident. The y-axis is nearly horizontal. The x-axis points vertical, parallel to the long axis of the vehicle. Experiment locations are designated by row numbers and tray letters. Looking toward the earth end of the vehicle, row numbers increase in a clockwise direction (1 through 12). The tray letters increase upward in the vertical direction (A through F).

LDEF was deployed in space in a nearly circular orbit on April 7, 1984. Mission duration was 2,106 days or nearly six years. The initial mean altitude for the mission was 482 km and the orbit was inclined 28.5° to the equator. Because of its unique 12-sided geometry, atomic oxygen fluence varied from experiment to experiment. The angle of each experiment tray surface with the ram direction was determined by the fixed structural geometry of the vehicle and its constant flight attitude while in orbit. Thus, the LDEF was ideally suited to experimental determination of the effects of atomic oxygen on materials.

2. OBJECTIVE

The objective of this work was to calculate atomic oxygen fluxes and fluences for LDEF exposed surfaces.

3. RESULTS

Results the calculations described herein are summarized in Figure 2. This figure shows the mission total atomic oxygen exposure accumulated on each tray and longeron location of LDEF during its mission. The data given in Figure 2 include an estimate of atomic oxygen exposure received by LDEF during an attitude excursion on retrieval which was added to the fluence accumulated during orbital flight. The view is of the earth end of the spacecraft. In this view, row numbers increase in the clockwise direction. The ram direction lies between rows 9 and 10. All trays on a row received the same atomic oxygen fluence.

The calculation incorporates the pitch and yaw angles for the vehicle determined by Dr. Bruce Banks, NASA Lewis Research Center (Reference 1). The yaw angle is 8.1 degrees with the spacecraft turned so that the ram direction lies between Rows 9 and 10. Pitch angle is 0.8 degree with the space end of the vehicle pitched forward. Roll angle is zero. Because of the forward pitch, trays on the space end of the vehicle received more atomic oxygen than did trays on the earth end of the vehicle.

The values given in Figure 2 are mission total values. More extensive tabulations covering the six years of orbital flight have been prepared and are presented in the Appendix. The Appendix gives calculated Atomic oxygen fluxes and fluences for each week of the LDEF

mission. Fluences for any period of time during the mission can be interpolated from the tabulated data.

Atomic oxygen flux was not constant during the mission. Decreasing solar activity caused atomic oxygen flux to decrease during the first three years of flight. Thereafter, the combination of increasing solar activity and decreasing altitude caused atomic oxygen flux to increase rapidly. Figure 3 shows ram direction atomic oxygen fluence for LDEF expressed as a percent of total fluence for the mission. This plot reflects the combined effect on atomic oxygen fluence caused by varying solar activity and loss of altitude. Roughly 50 percent of the atomic oxygen exposure accumulated during the last six months of the LDEF mission. The last year of the flight accounted for roughly 75 percent of the exposure.

The atomic oxygen calculation takes into account the effect of thermal molecular motion of atomic oxygen on atomic oxygen flux. The effect is shown in Figure 4. The plot compares atomic oxygen flux corrected for thermal molecular velocity with calculated values ignoring thermal molecular velocity. When thermal molecular velocity is considered, calculations show that surfaces parallel to the ram direction receive approximately four percent of the head-on flux. Surfaces at angles greater than 90° from ram experience a small atomic oxygen flux. For incident angles less than approximately 87.5°, predicted atomic oxygen fluxes with or without the inclusion of thermal velocity are nearly equal.

4. DERIVATION OF EQUATIONS FOR ATOMIC OXYGEN EXPOSURE

Molecules in a gas in thermal equilibrium have a Maxwellian speed distribution characteristic of their temperature. At 1000°K, the average molecular speed of atomic oxygen is 1.15 km/sec compared to an average speed of a spacecraft relative to the atmosphere of 7.24 km/sec at 400 km altitude in an easterly orbit. Because of thermal molecular motion, atomic oxygen flux on a surface at high incidence angles is not accurately given by the product of number density, spacecraft velocity and projected surface area. An equation to account for the effect of thermal molecular velocity as well as vehicle velocity is derived in the following paragraphs.

4.1 ADDITION OF THERMAL MOLECULAR AND VEHICLE VELOCITIES

The velocity of a molecule with respect to the spacecraft is the vector sum of its thermal velocity and the velocity of the spacecraft reversed. This relationship is depicted in Figure 5. The thermal velocity of a molecule is described by two distribution functions. $G(c)$, the Maxwell speed distribution function represents the fraction of molecules with speed in the range c to $(c + dc)$. The value of the speed distribution function varies with temperature. (A symbol glossary precedes the text.)

$$G(c) = (1/N) (\partial N / \partial c) = (M / 2\pi RT)^{3/2} [\exp(-Mc^2 / 2RT)] (4\pi c^2) \quad (1)$$

H , the solid angle distribution function, represents the fraction of molecules with velocity vectors directed in the range of solid angles ω to $(\omega + d\omega)$. Since all directions of the velocity vector are equally probable, the solid angle distribution function is a constant.

$$H = (1/N)(\partial N / \partial \omega) = 1/(4\pi) \quad (2)$$

The population of atomic oxygen molecules in the vicinity of the spacecraft is considered to be divided into infinitesimal velocity classes. For a given velocity class, molecular velocity is added to the ram vector to obtain the velocity of molecules in the class

relative to the spacecraft. An equation for the component of relative velocity perpendicular to the spacecraft surface is then derived for the specified molecular velocity class.

$$u = v \cos \alpha + c \cos \beta \quad (3)$$

Using the relative velocity equation and the two distribution functions, an equation is derived for flux at the surface caused by molecules contained in the velocity class. This equation is modified by expressing solid angle in terms of plane angle measured from the surface normal.

$$(\partial^2 F / \partial c \partial \omega) = H G N u \quad (4)$$

$$(\partial \omega / \partial \beta) = 2\pi \sin \beta \quad (5)$$

$$(\partial^2 F / \partial c \partial \beta) = (1/4\pi) G N u (2\pi \sin \beta) \quad (6)$$

The derivation yields a differential equation for molecular flux in terms of two independent variables and four constants. The independent variables are thermal molecular speed and the direction of the molecular velocity vector relative to the surface. The constants are temperature, number density, spacecraft velocity, and the angle the surface makes with the ram direction of the vehicle.

4.2 LIMITS OF INTEGRATION

The differential equation for flux is integrated with respect to the independent variables, molecular speed and angle, to obtain an equation for flux in terms of temperature, number density, spacecraft velocity and incidence angle. Values for the latter items are held constant during the integration process. To arrive at the equation for flux, limits for integration are devised for leading surfaces to include all molecules swept out by the advancing surface.

The gas molecules surrounding the spacecraft are separated into two speed populations. The first population includes those molecules that do not have sufficient velocity to "outrun" the spacecraft even if traveling directly away from the spacecraft surface. The second population includes those molecules that can "outrun" the advancing surface if traveling in a path directed at a sufficient angle away from the surface. Molecules that "outrun" the spacecraft are not included within the limits.

$$F = \int_0^{v \cos \alpha} \int_0^\pi (\partial^2 F / \partial c \partial \beta) \partial \beta \partial c + \int_{v \cos \alpha}^\infty \int_0^{\arccos[(-v \cos \alpha)/c]} (\partial^2 F / \partial c \partial \beta) \partial \beta \partial c \quad (7)$$

Integration limits for trailing surfaces (surfaces on the aft side of the spacecraft) can be devised to include molecules with velocities such that they can catch the spacecraft. However, the resulting integral is identical to that derived for leading surfaces. Hence, the integral shown leads to a valid equation for flux (atoms per unit area per unit time) for both leading and trailing surfaces, as follows:

$$F = 1/4 N \langle c \rangle \{ \exp(-U^2) + U \pi^{1/2} [1 + \operatorname{erf}(U)] \} \quad (8)$$

Where: $\langle c \rangle = (8RT/\pi M)^{1/2}$

and: $U = (2/\pi^{1/2})(v/\langle c \rangle) \cos \alpha$;

To simplify the equation, terms resulting from the integration process have been gathered into two expressions. The first expression, $\langle c \rangle$, can be recognized as the equation for average molecular speed consistent with kinetic molecular theory. The second expression, U , is a dimensionless statement for the normal component of speed for the advancing surface relative to average molecular speed multiplied by constant factors that appear in the integral.

Equation (8) has been derived elsewhere in connection with research on heat transfer and drag in rarefied gases (Reference 2).

4.3 CHARACTERISTICS OF THE CLOSED FORM SOLUTION

To illustrate agreement with kinetic theory, two specific limiting cases are considered: (1) zero spacecraft velocity; and, (2) zero average molecular speed (zero temperature).

$$\text{If, } v = 0, \quad \text{then: } F = 1/4 N \langle c \rangle \quad (9)$$

$$\text{If, } \langle c \rangle = 0, \quad \text{then: } F = N v \cos \alpha \quad (10)$$

$$\text{Otherwise: } F = 1/4 N \langle c \rangle f(U) \quad (11)$$

In the case of zero spacecraft velocity, $v = 0$, the equation is identical to that for the collisions by perfect gas molecules with a stationary plane surface. In the case of zero temperature, $c = 0$, the equation is identical to that for a stationary gas of known density swept out by a moving surface. In equation (11), the function, $f(U)$, equals the quantity shown in braces in equation (8).

5. PROGRAM FOR ATOMIC OXYGEN EXPOSURE COMPUTATIONS

The need for a computer program to handle the continuously varying inputs to equation (8) can be understood from the information shown in Figure 6. This figure shows atomic oxygen flux plotted as a function of altitude for atmospheric conditions of minimum, standard, and maximum solar activity. Atomic oxygen flux is sensitive to both altitude and solar activity. During periods of increased solar activity, the region of atomic oxygen generation in the earth's atmosphere expands outward because of absorption of extreme ultraviolet (EUV) radiation. This effect causes an increase in the number density of atomic oxygen at a given altitude. At a typical altitude for LDEF, 400 km, the atomic oxygen flux for maximum solar activity is more than an order of magnitude greater than the atomic oxygen flux for minimum solar activity. It is obvious that characterization of the atmosphere for a single typical condition would not be valid for the entire LDEF mission.

5.1 PROGRAM ELEMENTS

Figure 7 shows the elements of the computer model that was developed to calculate atomic oxygen flux. The model accounts for orbit position, co-rotation of the earth's atmosphere, spacecraft attitude (yaw, pitch, and roll), the condition of the atmosphere (altitude, latitude, longitude and time dependent factors), spacecraft velocity and surface inclination, and thermal molecular velocity.

5.2 ORBITAL MECHANICS

Atmospheric temperature and atomic oxygen number density are sensitive functions of satellite altitude and location. For the purpose at hand, altitude must be defined precisely. It is defined as the distance from mean sea level on an oblate earth to a point on an osculating orbit.

Accurate prediction of satellite position is essential for atomic oxygen flux computations. Computations must be made for a number of positions in an orbit to account for position dependence of atmospheric temperature and atomic oxygen density. The flux calculation must be repeated frequently during a mission to account for precession of the satellite orbit plane with respect to the sun and changes in solar activity. For the LDEF atomic oxygen calculation, flux was calculated at 5.75-minute intervals for the entire mission. Fluence as a function of time was obtained by numerical integration using all of the calculated values of flux. To support these calculations a table of satellite latitude, longitude, altitude, local solar time, and spacecraft velocity was prepared prior to the performing the atomic oxygen flux and fluence calculations.

The orbital mechanics calculations are based on state vectors calculated from NORAD elements which are in turn based on ground observations of LDEF recorded during its mission. The state vectors were calculated courtesy Cheryl Andrews of NASA Johnson Space Center for use, initially, in determining solar exposure of LDEF (Reference 3). Figure 8 shows the decay of the LDEF orbit with time as defined by the state vector data. Orbit parameters between tabulated state vectors were calculated using a Boeing Long Term Earth Satellite Orbit Prediction Program. The orbit prediction program accounts for eighth order gravitational harmonics, perturbations of sun and moon, atmospheric drag, and daily changes in solar activity.

The general course of calculation was to start at a state vector and then continue with simple adjustments to drag coefficient to minimize differences between calculated and observed positions of the spacecraft. Once significant error developed, the calculation was restarted using a later state vector as the starting position. Twenty-one such spans of calculation were needed to cover the LDEF mission. These calculation spans varied from 381 days to 11 days. Calculated orbital data was tabulated for 5.75-minute intervals for the mission.

Based on 103 points, the standard deviation between calculated altitude and state vector altitude was 0.61 kilometer. The mean difference between calculated and state vector altitudes was -0.13 kilometer.

If needed, the table of LDEF orbital parameters thus generated is available for other applications.

5.3 ATMOSPHERIC TEMPERATURE AND COMPOSITION

The NASA MSIS-86 model atmosphere program is used to calculate atmospheric temperature and composition. Inputs to the model atmosphere program are altitude and position information tabulated by the orbit mechanics routine; solar activity, indexed by the F10.7 cm radio flux; and, the geomagnetic activity index to determine the atomic oxygen density and atmospheric temperature. The MSIS-86 model calculates atomic density variations on the basis of global changes in exospheric temperature.

Atomic oxygen density in the atmosphere at orbital altitudes is strongly influenced by changes in the degree of solar activity. The F10.7 cm solar radio flux is used as a measure of solar activity and of the associated extreme ultraviolet radiation that affects atomic oxygen

generation. Atomic oxygen density variations correlate closely with F10.7 cm flux, although the F10.7 cm flux itself has little if any impact on the atmosphere.

Solar activity data used for LDEF atomic oxygen flux calculations were obtained from the National Geophysical Data Center (NGDC/NOAA), Boulder, Colorado. The average daily flux was determined weekly for the duration of the LDEF mission from the NORAD data. Figure 9 tracks the weekly average of daily values of F10.7 cm flux plotted as a function of time for the duration of the LDEF mission.

Another factor affecting the condition of the atmosphere is the geomagnetic index. During increased solar activity, the sun ejects plasma into the earth's magnetosphere, producing geomagnetic storms. These storms dump charged particles from the magnetosphere into the atmosphere where, through collisions, the particles ionize and heat the atmosphere. This geomagnetic effect augments effects of extreme ultraviolet radiation on atmospheric properties. The end result is an increase in the atomic oxygen density at orbital altitudes.

Geomagnetic index data were obtained from NGDC/NOAA through September 1989 and for the balance of the LDEF mission from the Air Force Global Weather Center (AFGWC), Omaha, NB. The average index was determined weekly for the LDEF mission. Figure 10 shows the weekly geomagnetic index plotted as a function of time for the duration of the mission.

Figure 11 shows the combined effects of solar activity and altitude decay on atomic oxygen density as a function of time for the LDEF mission. During the last year of flight, LDEF lost altitude rapidly, and as a result was exposed to an environment with progressively higher atomic oxygen density.

5.4 CO-ROTATION OF THE ATMOSPHERE

The computer model accounts for co-rotation of the earth and the atmosphere. The atmosphere rotates with the earth while the spacecraft rotates around the earth. The velocity of the atmosphere relative to the spacecraft (ram vector) is equal to its own motion minus the motion of the spacecraft. Both the direction and magnitude of the ram vector are affected by atmospheric motion. The relationship between the quantities is shown in Figure 12.

For small angles of inclination, the decrease in ram vector magnitude is nearly constant for all points in an orbit. For a spacecraft at an altitude of 400 km in an orbit inclined 28.5° to the earth's equator, the ram speed is decreased 0.43 km/sec. The ram direction shifts 1.86° to right and left of the heading during each complete orbit. Atomic oxygen fluence for LDEF is decreased by approximately 5 percent by co-rotation of the atmosphere.

5.5 AVERAGE INCIDENCE ANGLE

Yaw, pitch, and roll, changes the angle calculated between the ram direction and surface normal for each exposed surface of a spacecraft.

For LDEF the heading of the spacecraft was nearly coincident with the z-axis, and the y-axis was nearly horizontal (Figure 1). For this orientation, yaw is defined as a rotation about the x-axis. Pitch is defined as a rotation about the y-axis and roll as a rotation about the z-axis. These three operations are not commutative; that is, the final orientation of the satellite's coordinate axes with its heading depends on the order in which the angular rotations are performed. However, the errors in orientation are small for small rotations. The authors have assumed that the first rotation of the satellite was in yaw, then pitch, and last roll. When

calculating surface normal orientations for large values of yaw, pitch, and roll it is essential to account for the proper order of the angular displacements.

5.6 COMPUTATION OF ATOMIC OXYGEN FLUX AND FLUENCE

Atomic oxygen flux is calculated with equation (8) derived in Section 4. Required inputs are temperature and density from the MSIS-86 model atmosphere, angle between the surface normal and the ram vector, and the resultant ram speed after correcting for co-rotation of the atmosphere. The calculation was performed for time intervals spaced 5.75 minutes apart for the duration of the LDEF mission with results tabulated for each experiment row and for both the space end and the earth end of the vehicle. Fluence (the integral of flux with time) for each surface was calculated by summation of the fluences calculated for the 5.75-minute intervals.

6. LDEF ATOMIC OXYGEN EXPOSURE DATA

6.1 ORBITAL FLIGHT PRIOR TO RETRIEVAL

A summary of atomic oxygen exposure data is shown on Figures 13 through 41. The definitions given in the Appendix are valid for the figures.

Figure 13 shows the ram atomic oxygen flux for LDEF as a function of mission time. The ram atomic oxygen fluxes correlate well with solar activity.

Figure 14 shows ram atomic oxygen fluence as a function of mission time. A combination of orbit decay and increasing high solar activity accounts for the rapid increase in fluence at the end of the mission.

Figure 15 shows the dependence of mission total fluence average incidence angle for LDEF.

Figures 16 through 41 show atomic oxygen fluence for the exposed surfaces of the vehicle as functions of mission time.

A detailed tabulation of the data shown in Figures 16 through 41 is given in the Appendix.

6.2 ATOMIC OXYGEN EXPOSURE DURING RETRIEVAL

Following retrieval, LDEF was carried in the cargo bay of the shuttle (STS-32). The cargo bay doors were open until the vehicle started its descent. During this period, the attitude of the shuttle was maintained such that the ram vector could not reach the LDEF, except for a brief attitude excursion lasting approximately 16 minutes. During the excursion, the ram vector did impinge on LDEF at varying angles. Thus, there was some accumulation of atomic oxygen fluence.

An estimate of the exposure of LDEF experiment rows is given in Table 1. The only experiment rows that could have been seriously affected are Rows 1, 2, and 3. Rows 4 through 8 were shielded from exposure by the fuselage of the shuttle. Rows 9, 10, 11 and 12 accumulated such a large exposure to atomic oxygen on orbit prior to retrieval that a small exposure during the attitude excursion would be insignificant by comparison.

In order to calculate atomic oxygen exposure, the angle between the ram vector and the normal to the experiment surface as a function of time is needed. These data were compiled

and made available for the calculation reported in Table 1 courtesy of Diane G. Hord, NASA-Johnson Space Center for Rows 3 and 4. The attitude excursion was the dominant factor affecting atomic oxygen exposure of Rows 2 and 3. The exposure of Row 3 was slightly less than that of Row 2. This is because Row 3 was partially shielded by the shuttle; Row 3 could not see the ram vector at small angles of incidence. Row 2 was more in the clear.

Attitude data for Row 1 are not developed. However, the exposure of Row 1 should be similar to that of Row 2. Likewise, the exposure of Longerons 1-2 and 12-1 should be similar to that calculated for Row 2. The exposure of Longerons 2-3 should be nearly equal to the average of the values calculated for Rows 2 and 3. These estimates for exposure during the attitude excursion are included with the total mission fluences reported in Figure 1.

Tables 2, 3 and 4 show the attitude excursion data, developed by NASA-Johnson Space Center, on which these calculations were based. Tables 2 and 3 present the incidence angle data for experiment Rows 2 and 3 during periods when the LDEF was not shielded from ram exposure. Latitude, longitude and altitude of the shuttle as functions of time are given in Table 4. The data in Table 4 were used to calculate atomic oxygen flux as a function of incidence angle and time. Flux values were then assigned to the exposure periods given in Tables 2 and 3. The fluxes were multiplied by the indicated exposure times and the products were totaled to obtain the fluence values reported in Table 1 for the excursion.

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TABLE 1. Atomic Oxygen Fluences During The Attitude Excursion Compared With On-Orbit Fluences

LOCATION	ATOMIC OXYGEN FLUENCE	
	ON-ORBIT	ATTITUDE EXCURSION
Row 1	7.29E+16	*
Longeron	7.73E+12	*
Row 2	4.81E+08	1.54E+17
Longeron	1.44E+05	*
Row 3	1.32E+03	1.32E+17

* Data Not Available

TABLE 2. Attitude Excursion Data For Row 2

START GMT	END GMT	TIME IN HALF CONE ANGLE			
		0-30°	30°-60°	60°-90°	SHIELDED
23:52:12	23:52:27			0:00:15	
23:52:27	23:53:12		0:00:45		
23:53:12	23:54:28			0:01:16	
23:54:28	23:54:49		0:00:21		
23:54:49	23:55:17	0:00:28			
23:55:17	23:55:28		0:00:11		
23:55:28	23:55:39			0:00:11	
23:55:39	23:56:28				0:00:49
23:56:28	23:56:40			0:00:12	
23:56:40	23:56:53		0:00:13		
23:56:53	23:57:13	0:00:20			
23:57:13	23:57:26		0:00:13		
23:57:26	23:57:40			0:00:14	
23:57:40	23:58:27				0:00:47
23:58:27	23:58:39			0:00:12	
23:58:39	23:58:51		0:00:12		
23:58:51	23:59:15	0:00:24			
23:59:15	23:59:26		0:00:11		
23:59:26	23:59:37			0:00:11	
23:59:37	0:00:32				0:00:55
0:00:32	0:00:45			0:00:13	
0:00:45	0:00:57		0:00:12		
0:00:57	0:01:22	0:00:25			
0:01:22	0:01:40		0:00:18		
0:01:40	0:01:45			0:00:05	
0:01:45	0:02:24		0:00:39		
0:02:24	0:09:10			0:06:46	
TOTALS, HRS:MIN:SEC		0:01:37	0:03:15	0:09:35	0:02:31

TABLE 3. Attitude Excursion Data For Row 3

START GMT	END GMT	TIME IN HALF CONE ANGLE			
		0-30°	30°-60°	60°-90°	SHIELDED
23:52:26	23:53:24			0:00:58	
23:53:24	23:54:19				0:00:55
23:54:19	23:54:37			0:00:18	
23:54:37	23:54:53		0:00:16		
23:54:53	23:55:10	0:00:17			
23:55:10	23:55:23		0:00:13		
23:55:23	23:55:33			0:00:10	
23:55:33	23:56:36				0:01:03
23:56:36	23:56:50			0:00:14	
23:56:50	23:57:19		0:00:29		
23:57:19	23:57:33			0:00:14	
23:57:33	23:58:35				
23:58:35	23:58:46			0:00:11	
23:58:46	23:59:21		0:00:35		
23:59:21	23:59:32			0:00:11	
23:59:32	0:00:37				0:01:05
0:00:37	0:00:50			0:00:13	
0:00:50	0:01:31		0:00:41		
0:01:31	0:08:38			0:07:07	
TOTALS, HRS:MIN:SEC		0:00:17	0:02:14	0:09:36	0:03:03

TABLE 4. Orbit Position Data During The Attitude Excursion

DATE/GMT (hms)		LATITUDE (deg)	LONGITUDE (deg)	ALTITUDE(km)
1/17/92	23:52:12	28.47	60.58	327.73
	23:53:12	28.17	64.81	327.64
	23:54:12	27.73	69.00	327.51
	23:55:12	27.14	73.16	327.38
	23:56:12	26.42	77.26	327.23
	23:57:12	25.57	81.31	327.06
	23:58:12	24.59	85.29	326.90
	23:59:12	23.49	89.20	326.71
1/18/92	0:00:12	22.29	93.05	326.54
	0:01:12	20.99	96.81	326.40
	0:02:12	19.59	100.51	326.23
	0:03:12	18.11	104.14	326.08
	0:04:12	16.55	107.70	325.99
	0:05:12	14.92	111.20	325.90
	0:06:12	13.23	114.65	325.84
	0:07:12	11.49	118.04	325.86
	0:08:12	9.70	121.39	325.84
	0:08:57	8.40	123.87	325.86

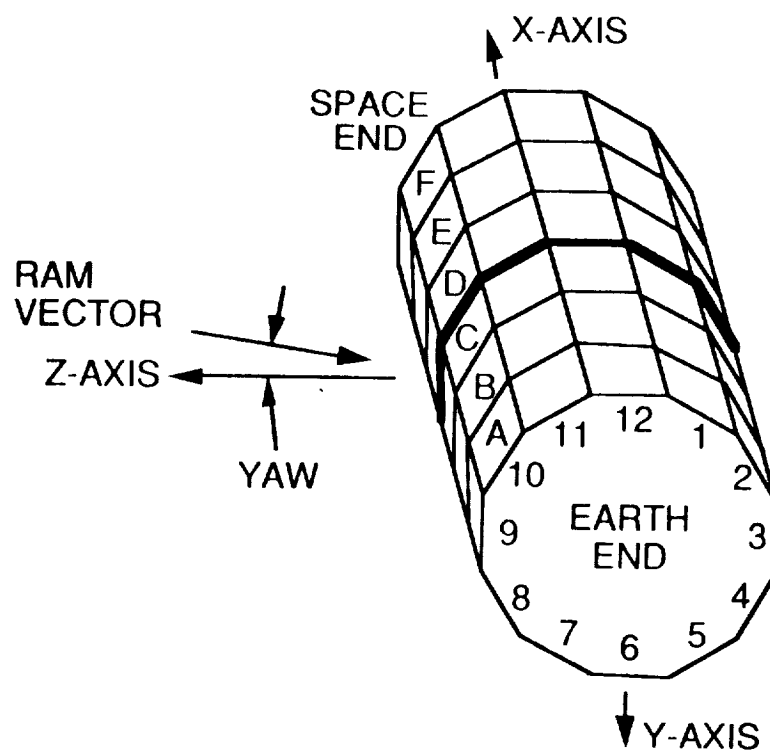


Figure 1. Designation of LDEF surfaces and definition of coordinates.

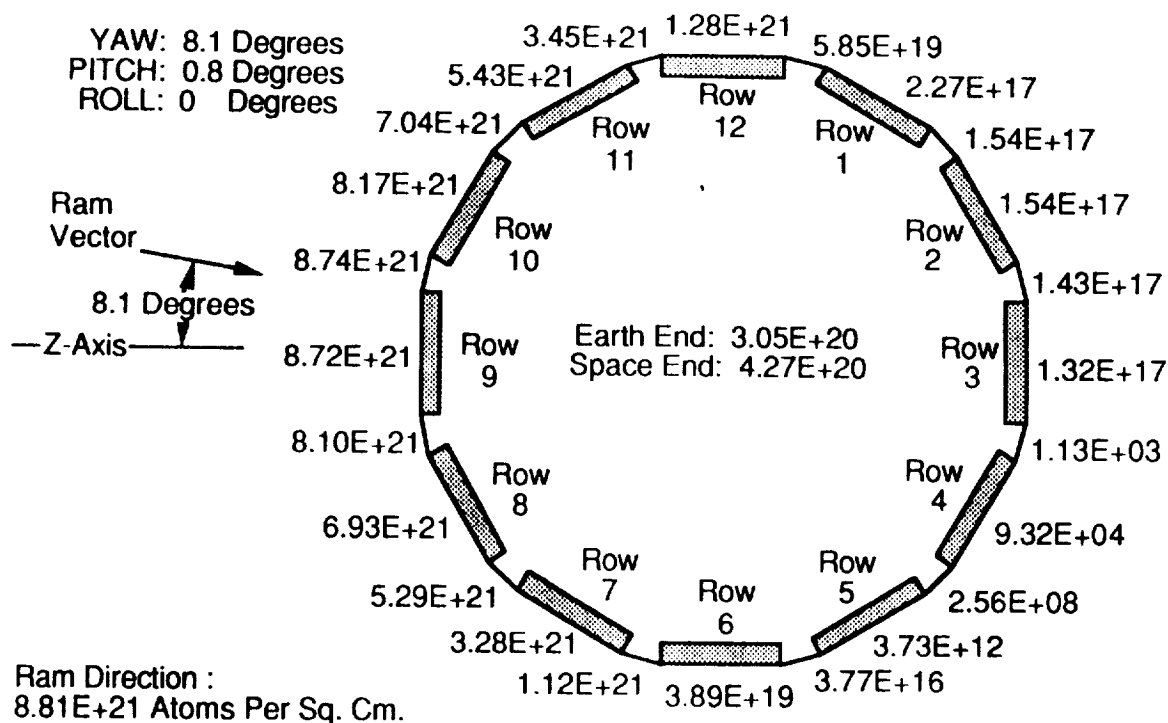


Figure 2. Atomic oxygen fluences at end of mission for all row, longeron, and end bay locations including the fluence received during the retrieval attitude excursion.

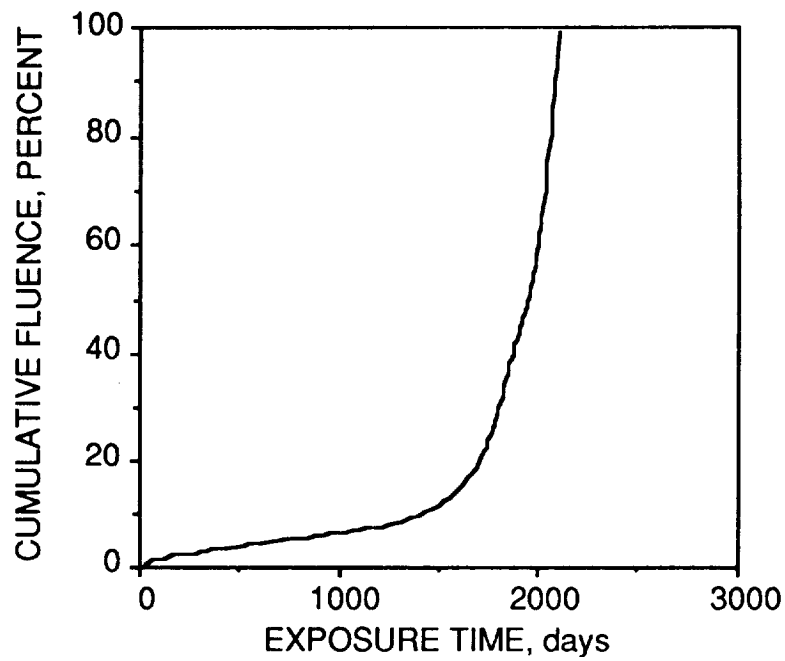


Figure 3. Atomic oxygen fluence as a percent of total exposure.

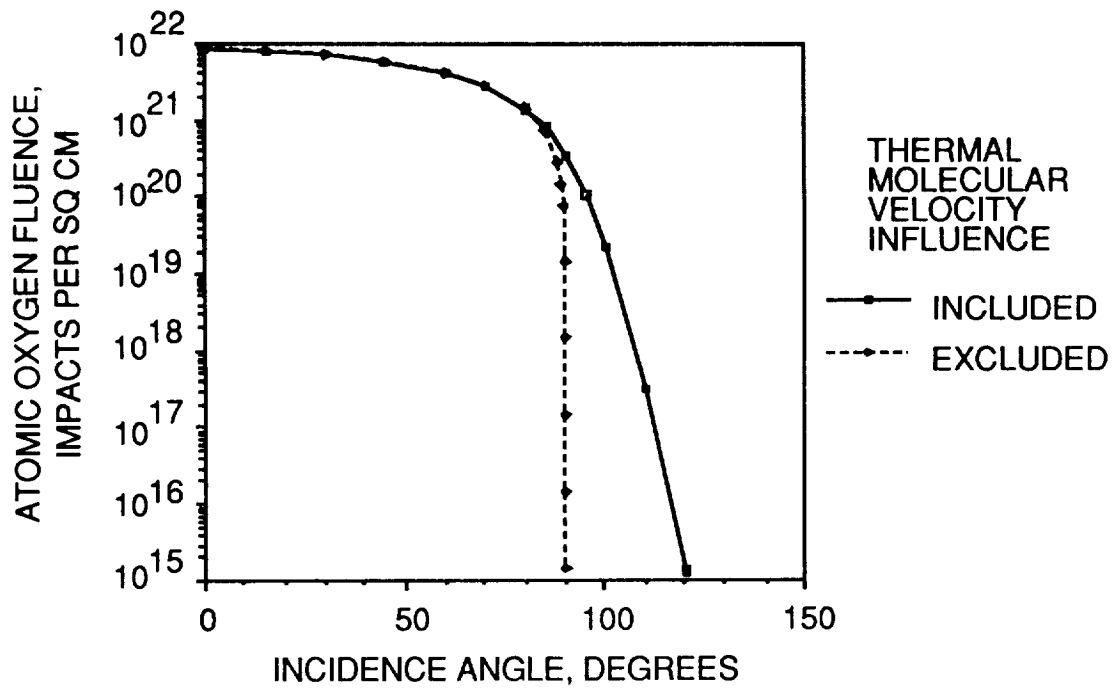


Figure 4. Effect of thermal molecular velocity on atomic oxygen fluence.

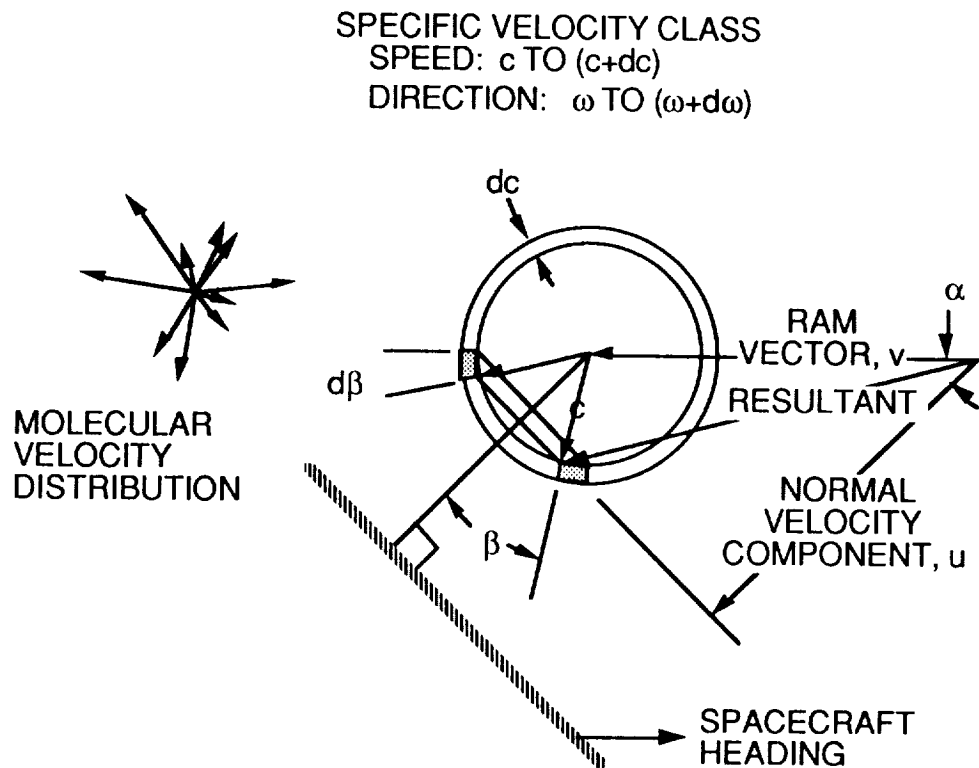


Figure 5. Vector addition of molecular and ram velocities.

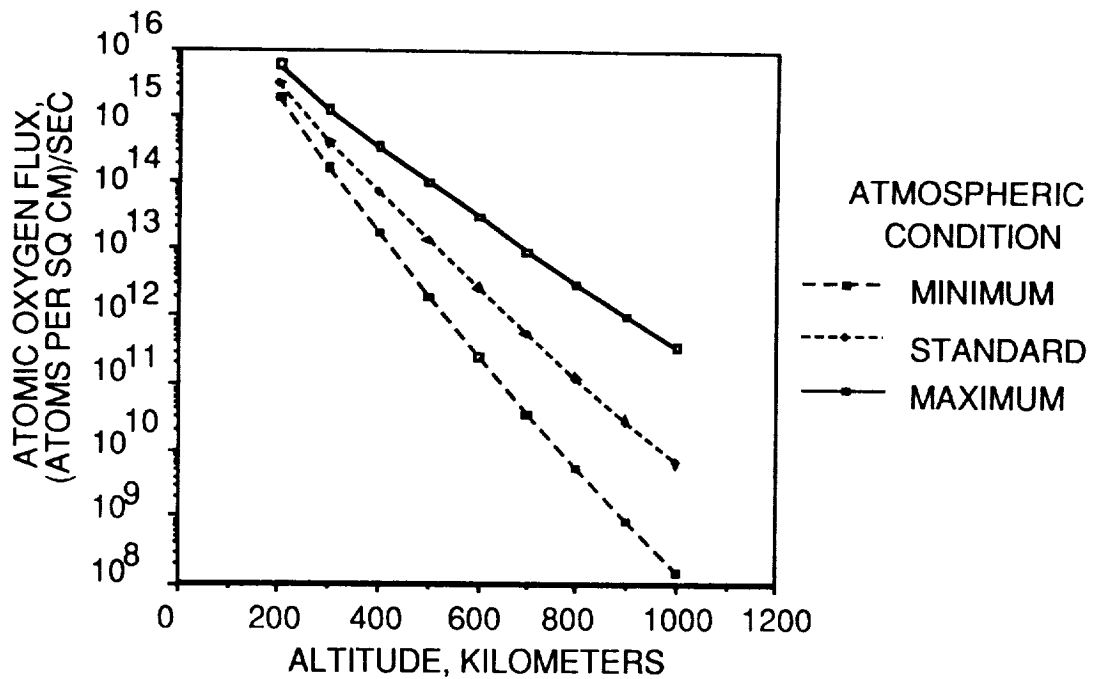


Figure 6. Effects of solar activity and altitude changes on atomic oxygen flux.

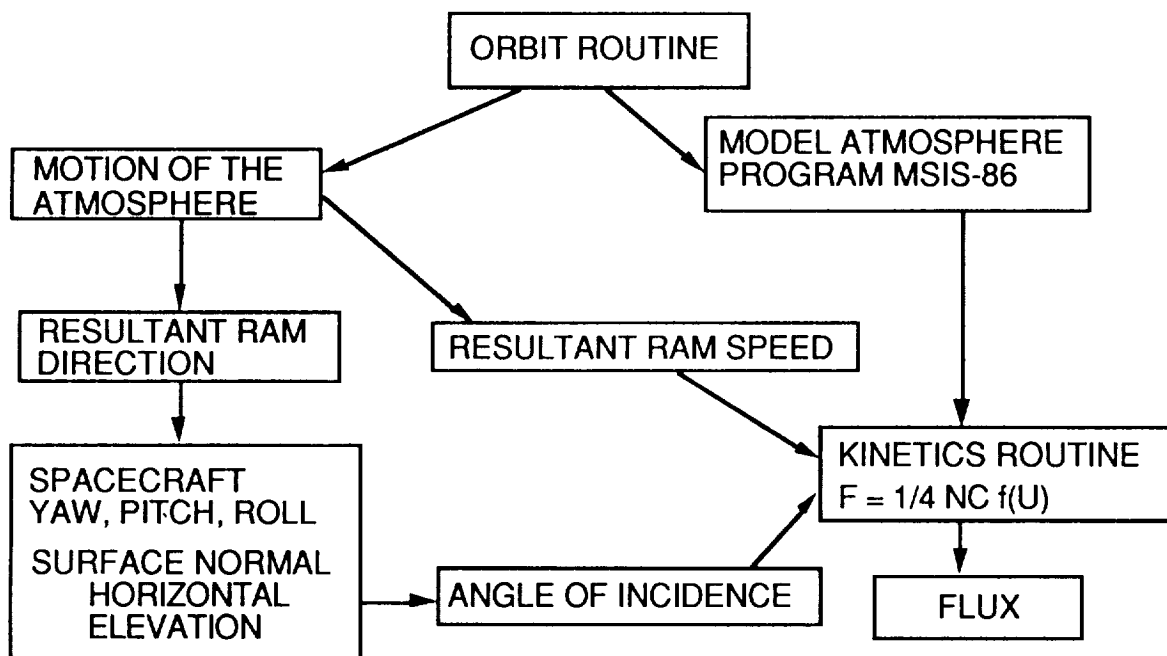


Figure 7. Program elements diagram.

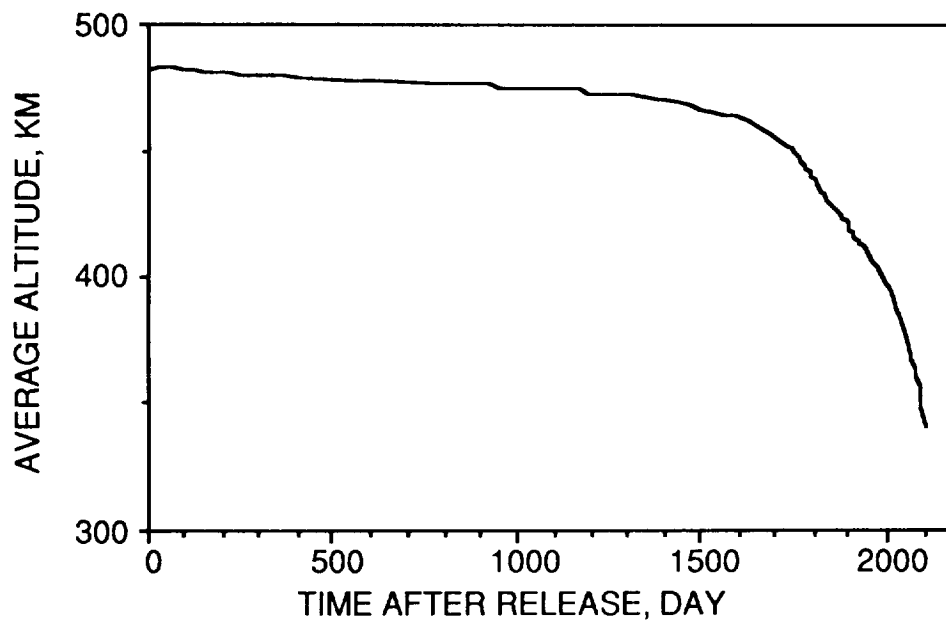


Figure 8. Decay of average orbit altitude with mission time.

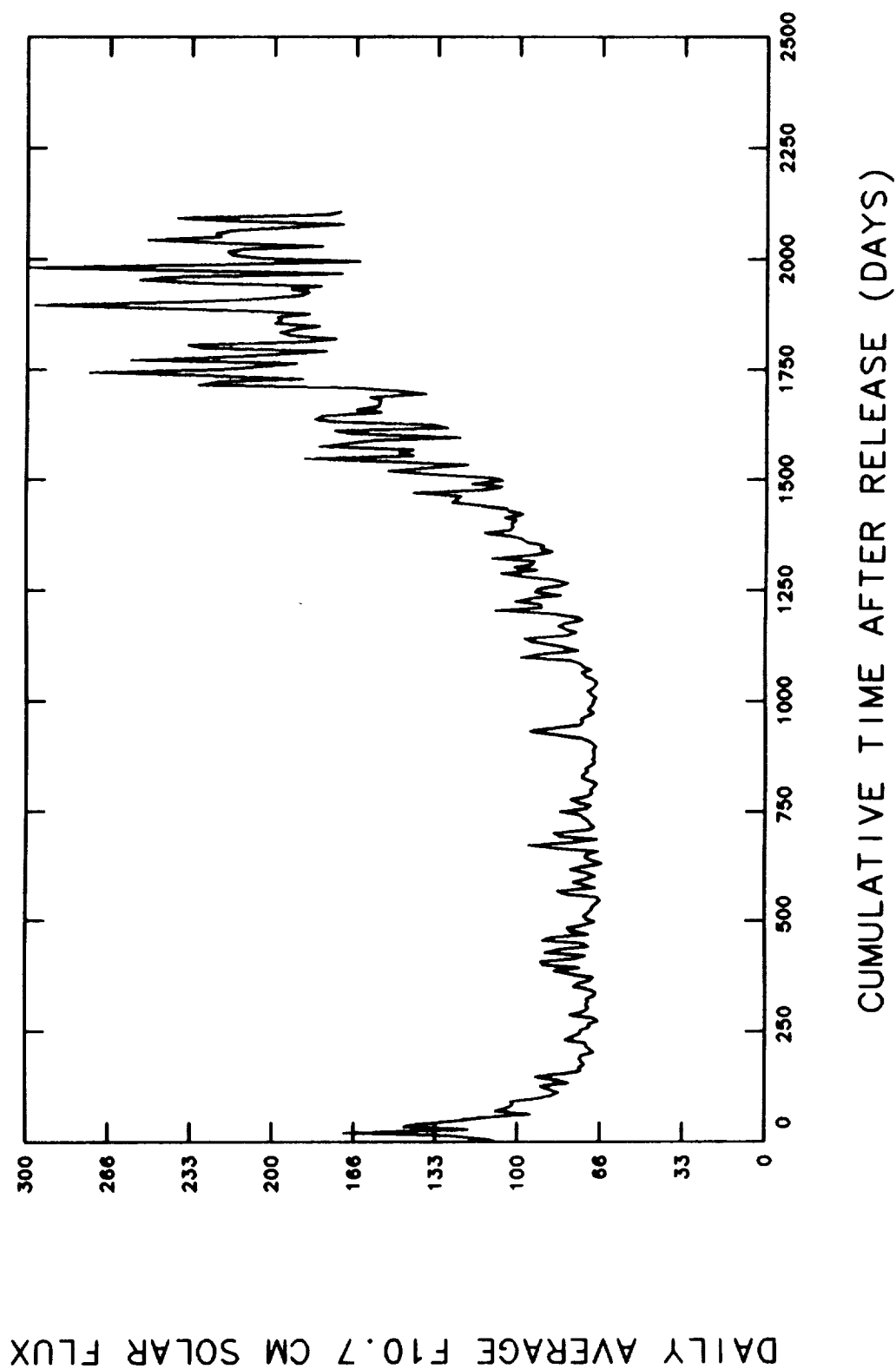


FIGURE 9. WEEKLY AVERAGE OF DAILY F10.7 CM SOLAR FLUX DURING THE LDEF MISSION.

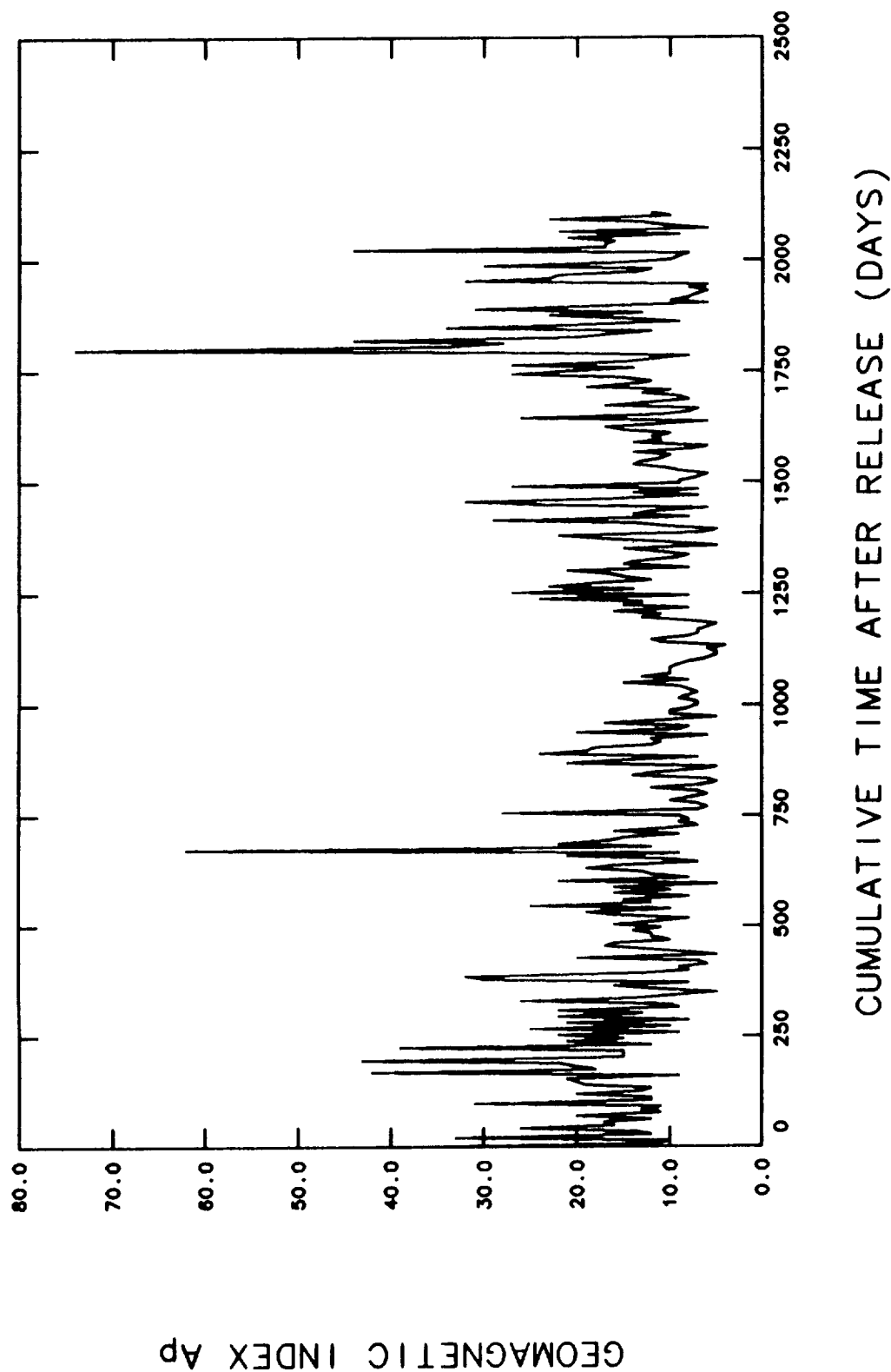


FIGURE 10. WEEKLY AVERAGE OF DAILY GEOMAGNETIC INDEX Ap DURING THE LDEF MISSION.

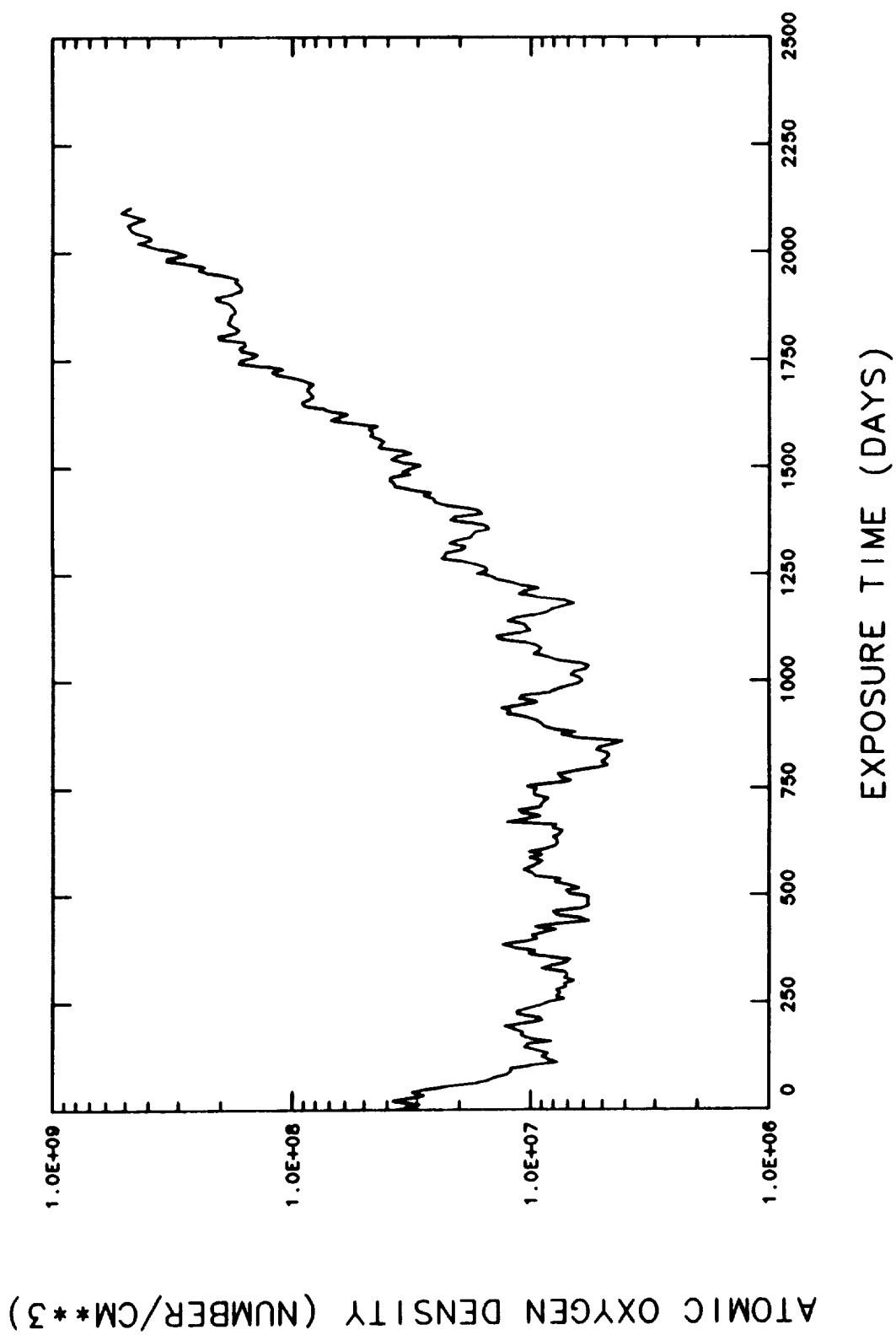


FIGURE 11. COMBINED EFFECTS OF ALTITUDE DECAY AND SOLAR ACTIVITY CHANGES ON ATOMIC OXYGEN DENSITY.

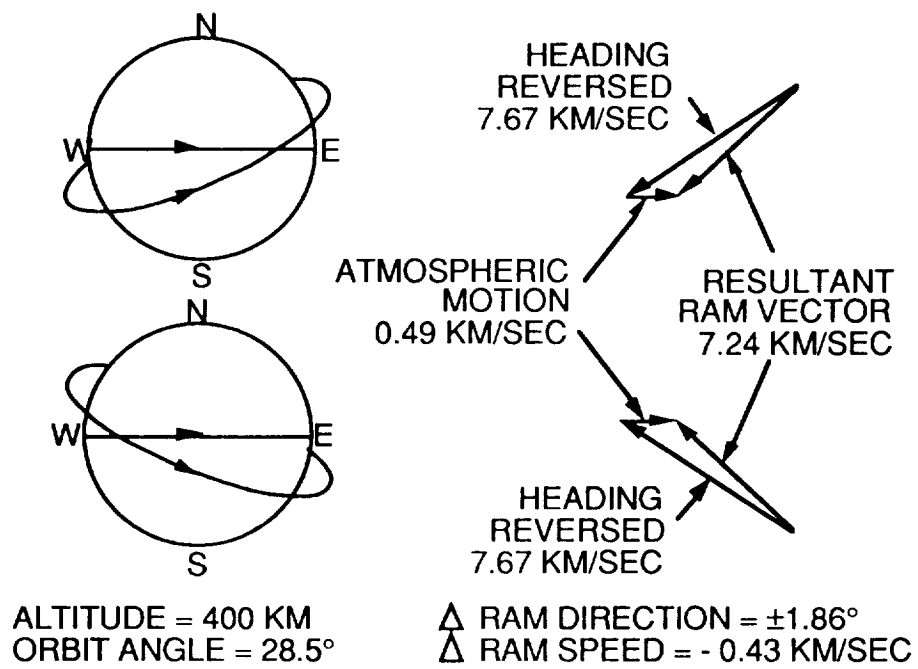


Figure 12. Co-rotation of the earth's atmosphere.

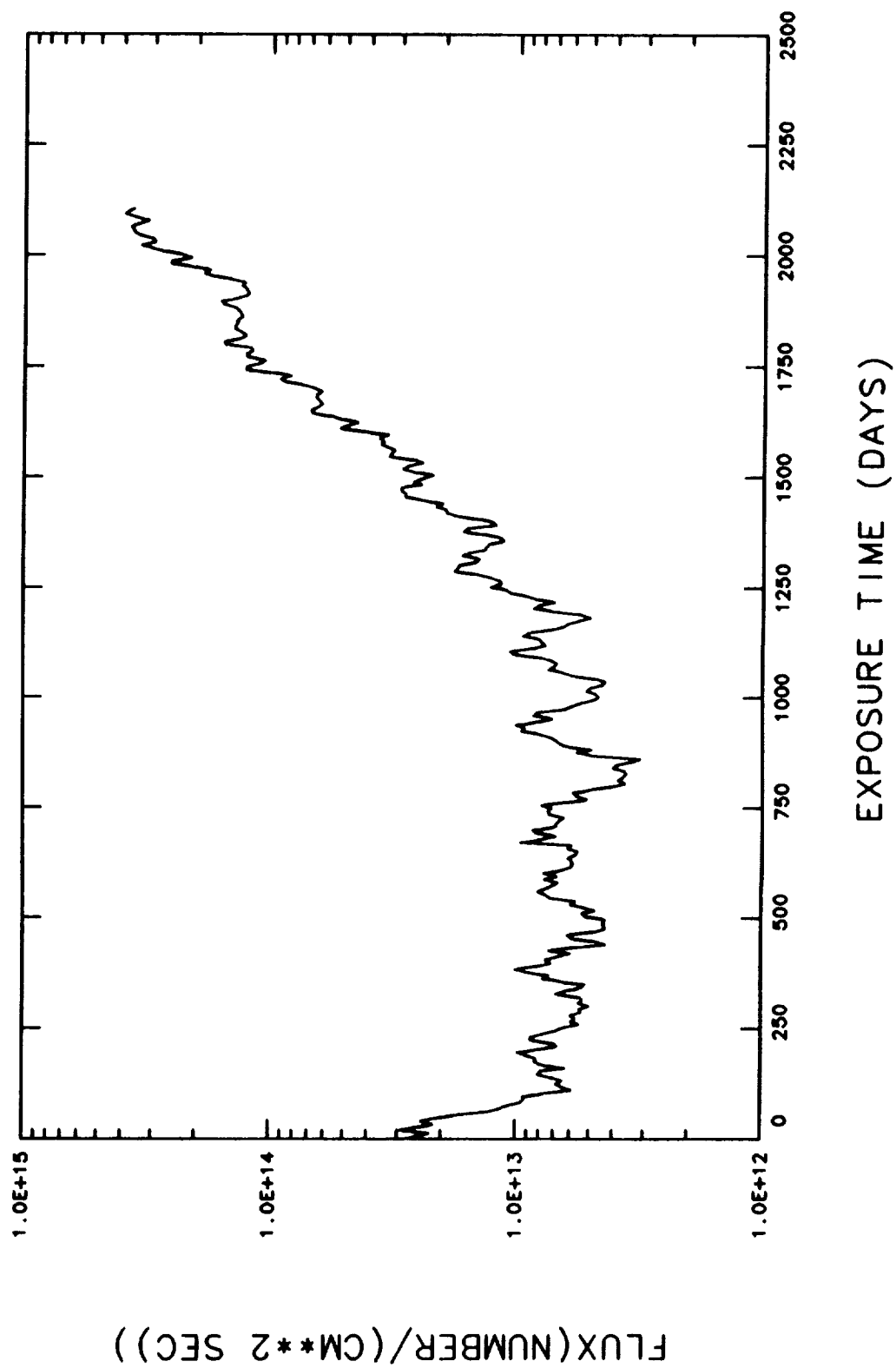


FIGURE 13. RAM ATOMIC OXYGEN FLUX VS TIME FOR LDEF.

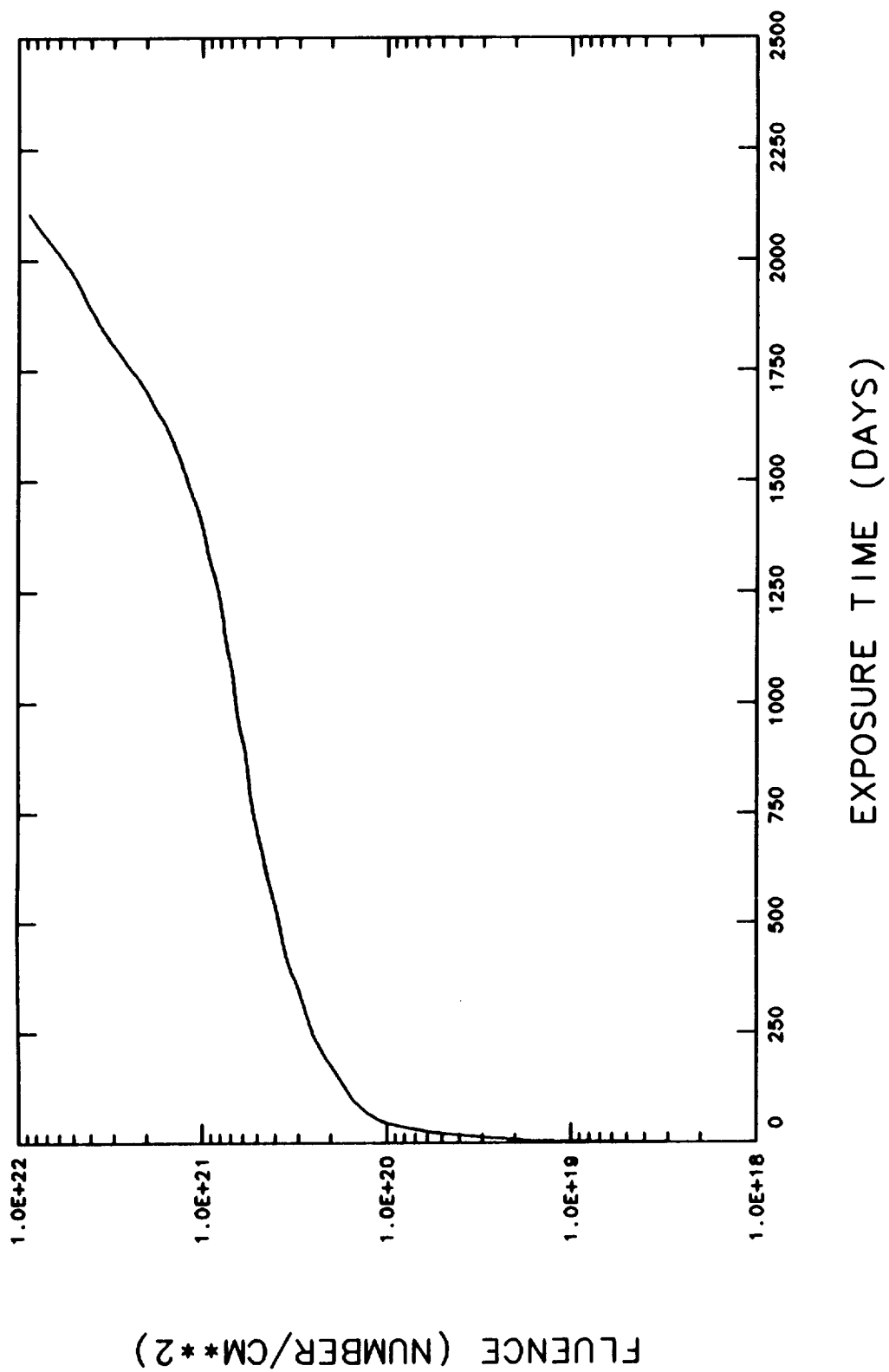


FIGURE 14. RAM ATOMIC OXYGEN FLUENCE VS TIME FOR LDEF.

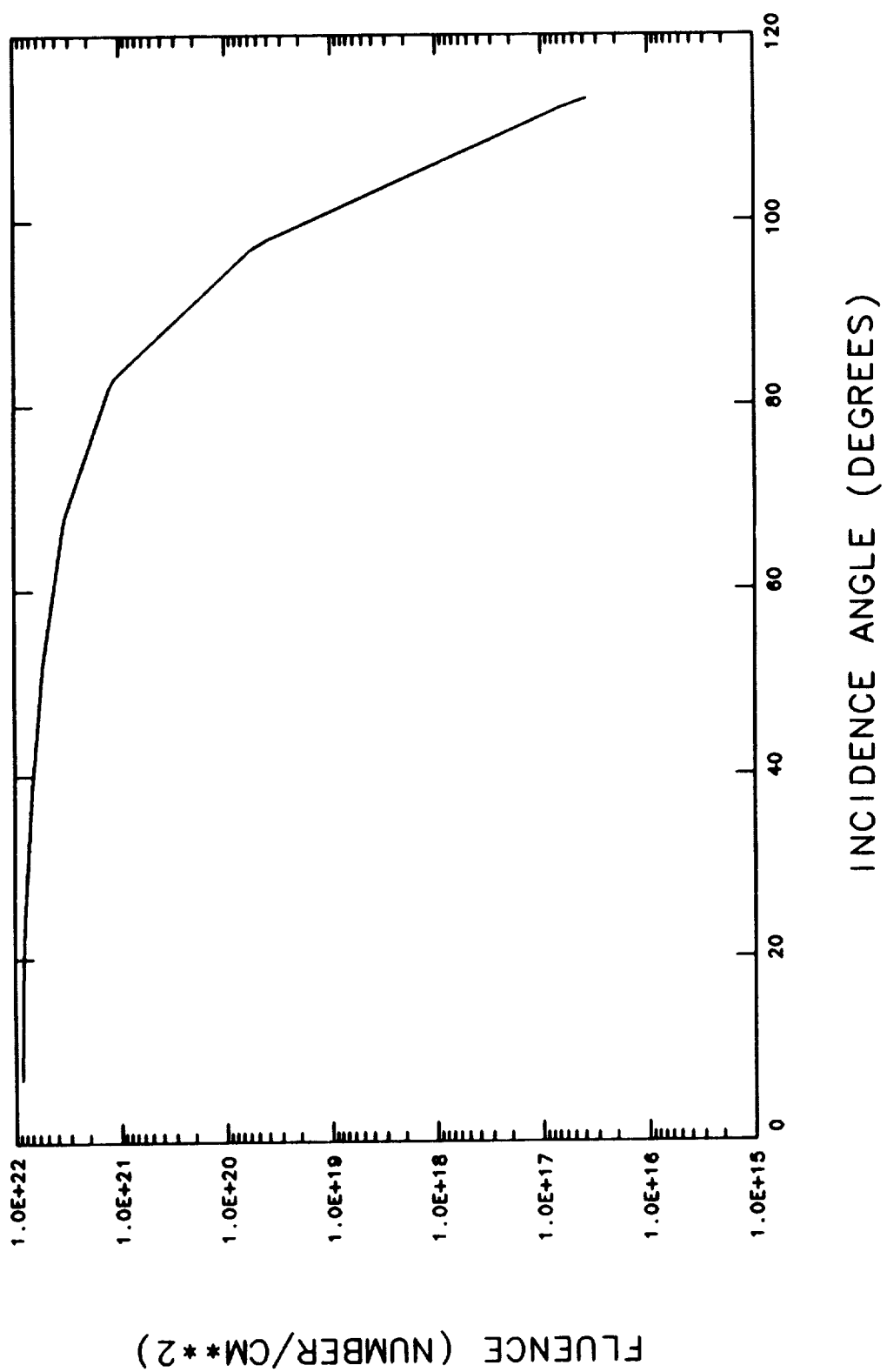


FIGURE 15. ATOMIC OXYGEN FLUENCE AT RECOVERY VS AVERAGE INCIDENCE ANGLE.

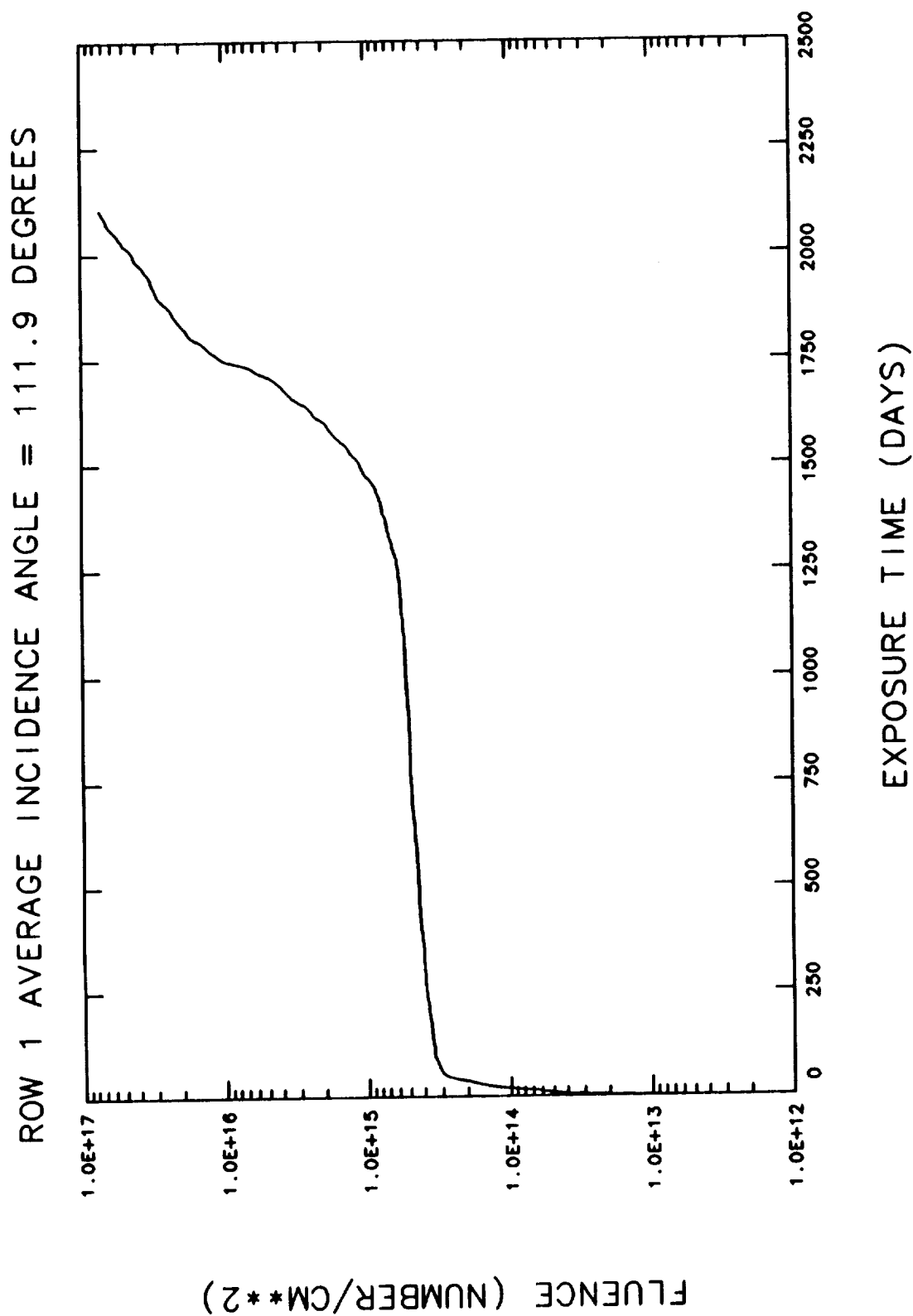
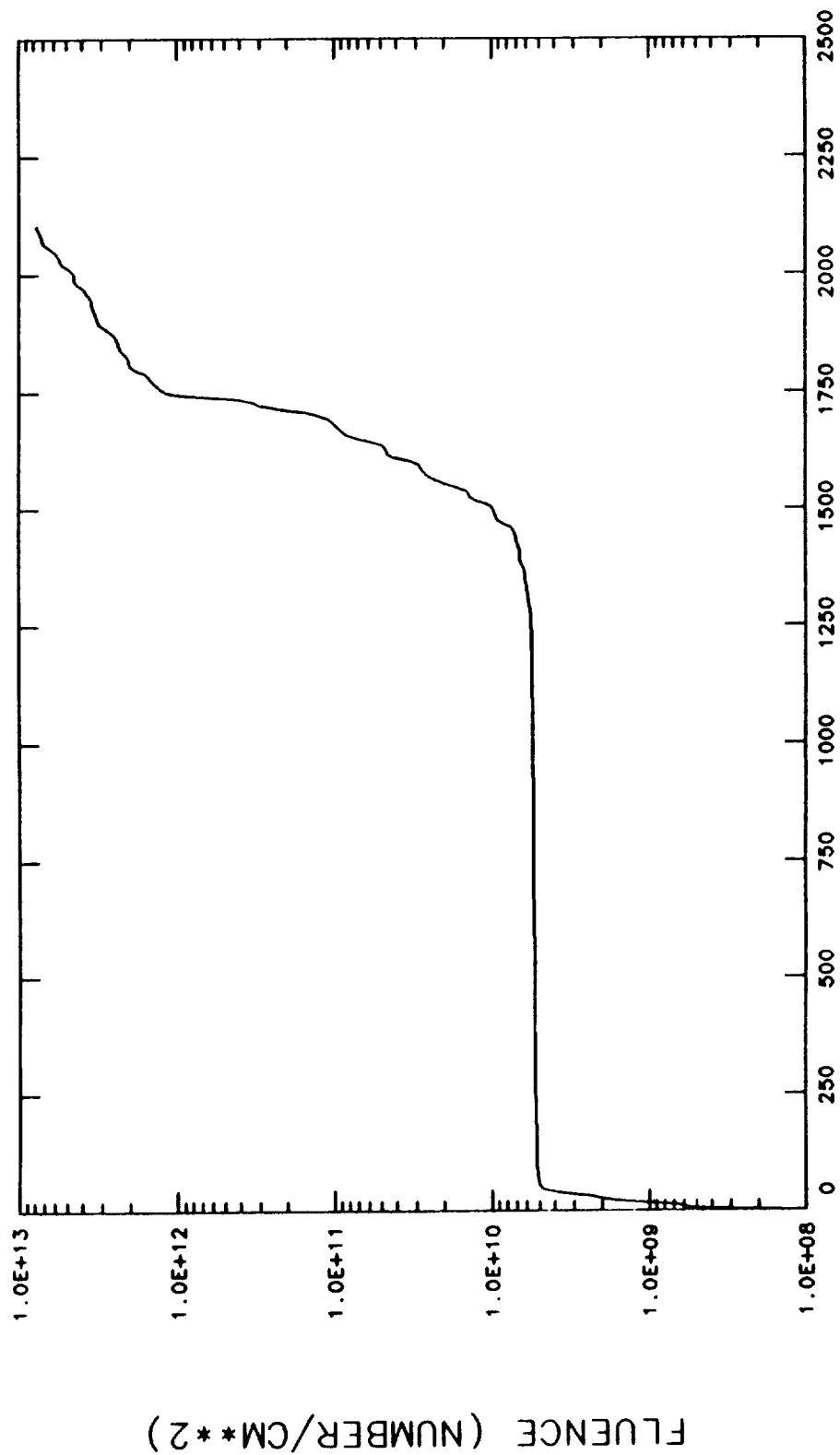


FIGURE 16. ATOMIC OXYGEN FLUENCE VS TIME FOR ROW 1.

LONGERON 1 - 2 AVERAGE INCIDENCE ANGLE = 126.9 DEGREES



EXPOSURE TIME (DAYS)

FIGURE 17. ATOMIC OXYGEN FLUENCE VS TIME FOR LONGERON 1-2.

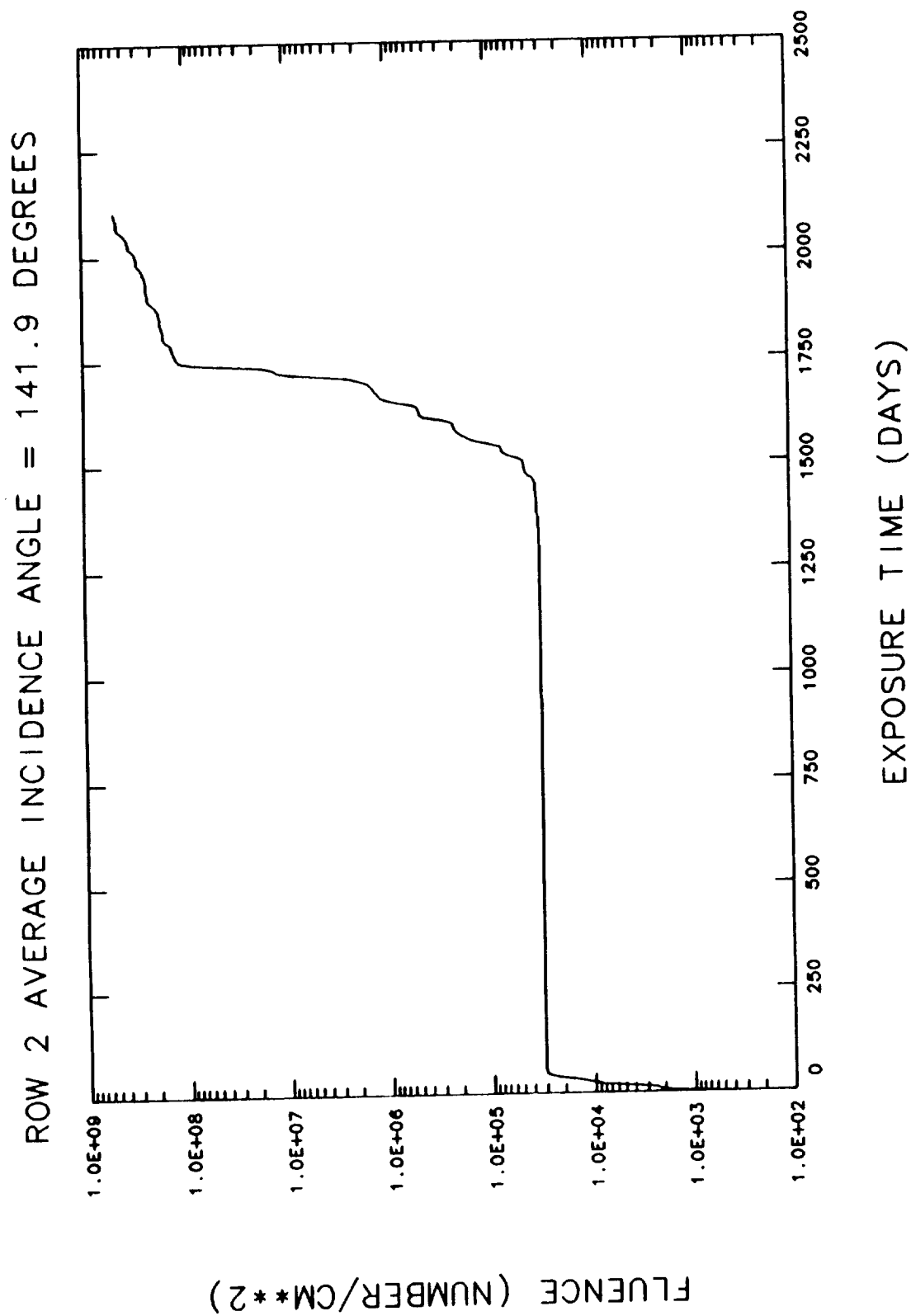


FIGURE 18. ATOMIC OXYGEN FLUENCE VS TIME FOR ROW 2.

LONGERON 2 - 3 AVERAGE INCIDENCE ANGLE = 156.9 DEGREES

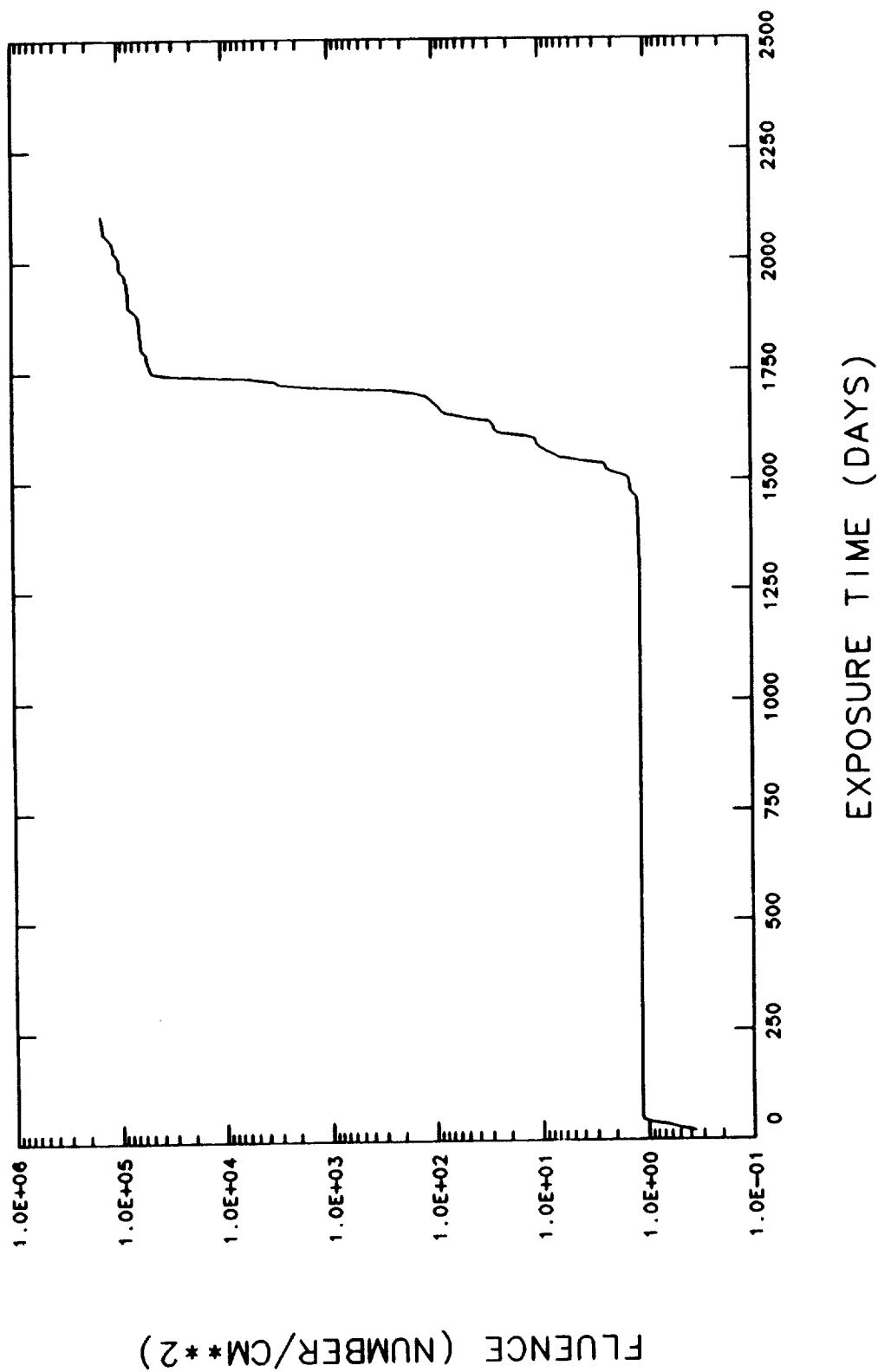


FIGURE 19. ATOMIC OXYGEN FLUENCE VS TIME FOR LONGERON 2-3.

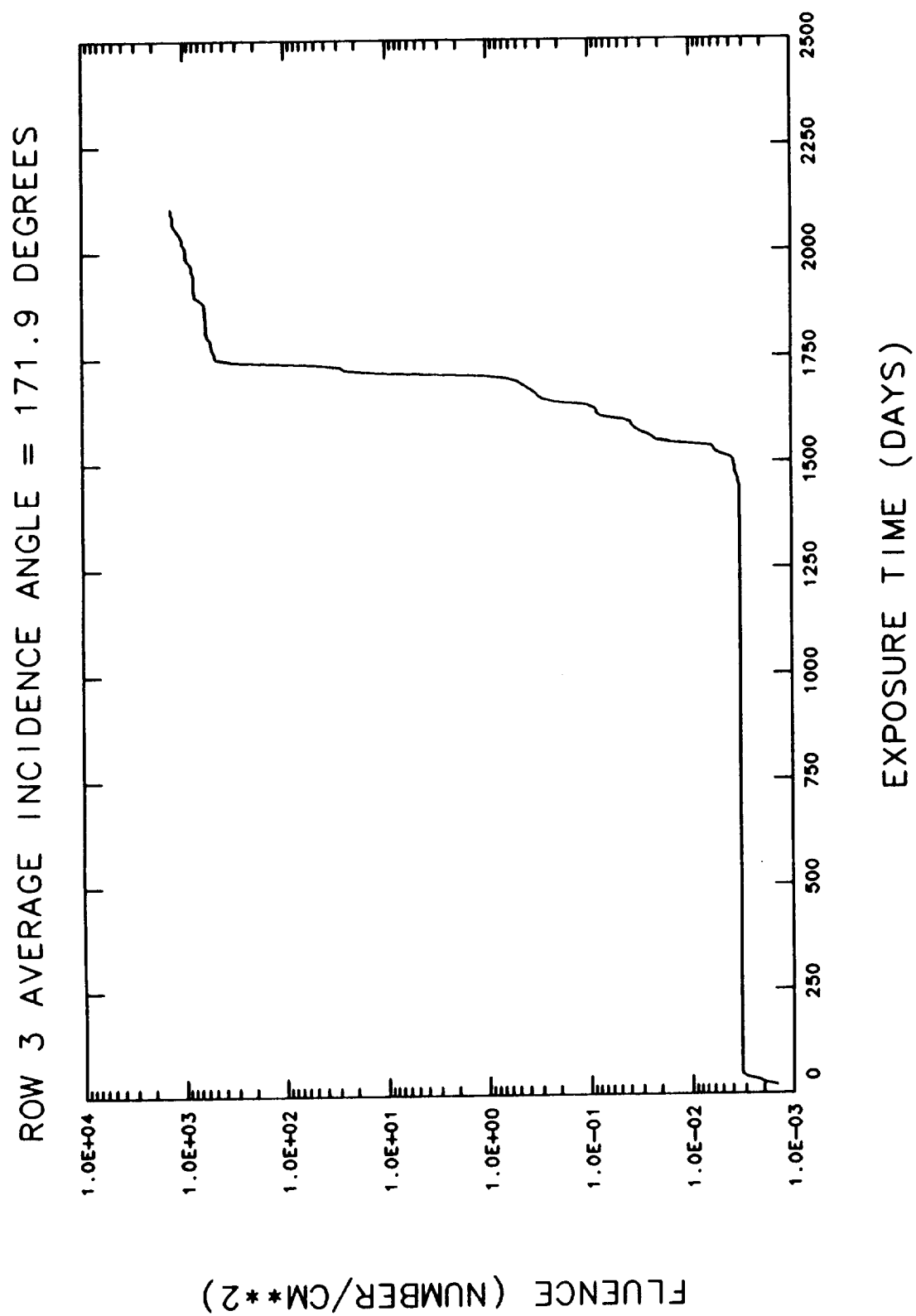


FIGURE 20. ATOMIC OXYGEN FLUENCE VS TIME FOR ROW 3.

LONGERON 3 - 4 AVERAGE INCIDENCE ANGLE = 173.1 DEGREES

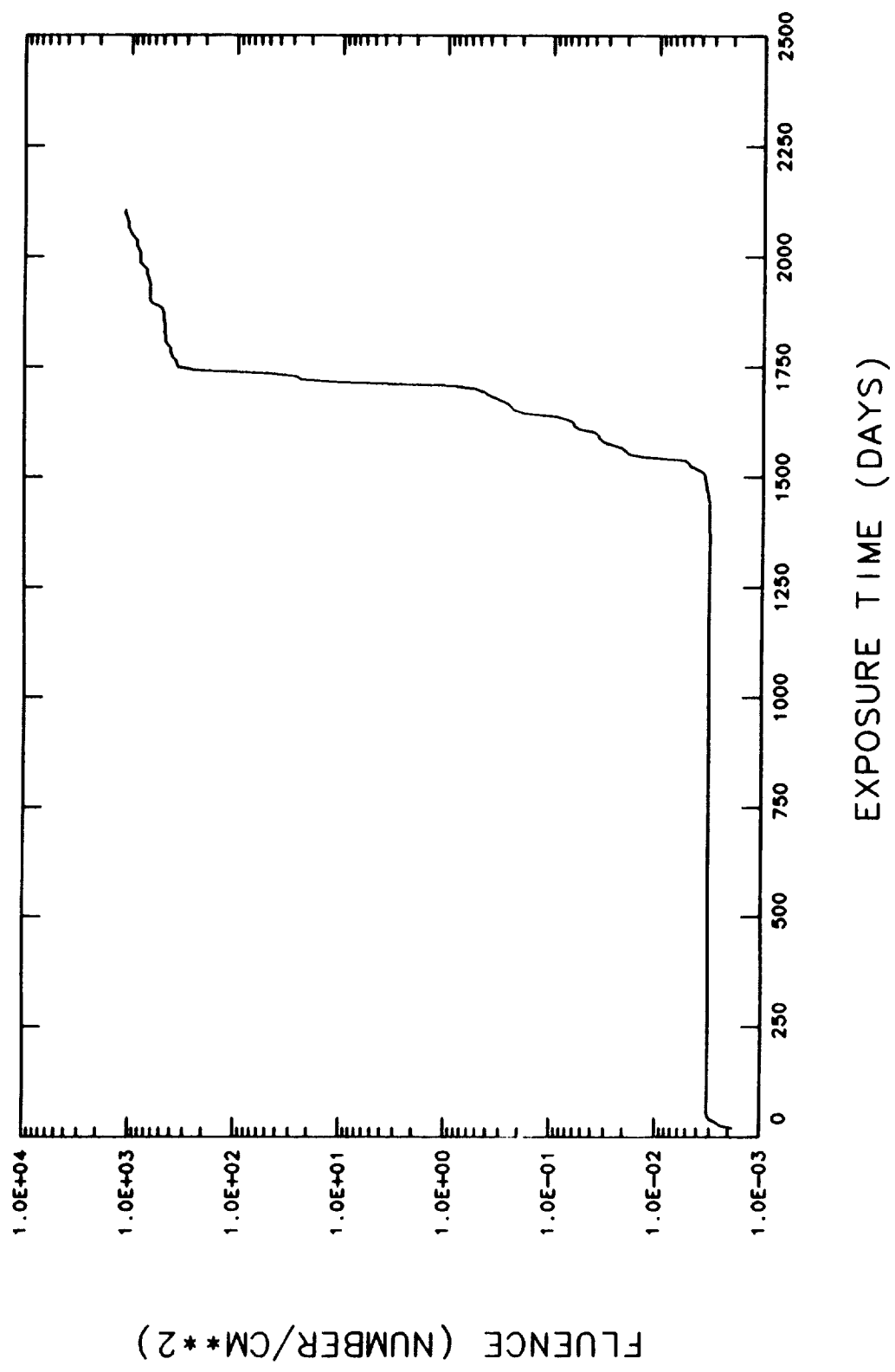


FIGURE 21. ATOMIC OXYGEN FLUENCE VS TIME FOR LONGERON 3-4.

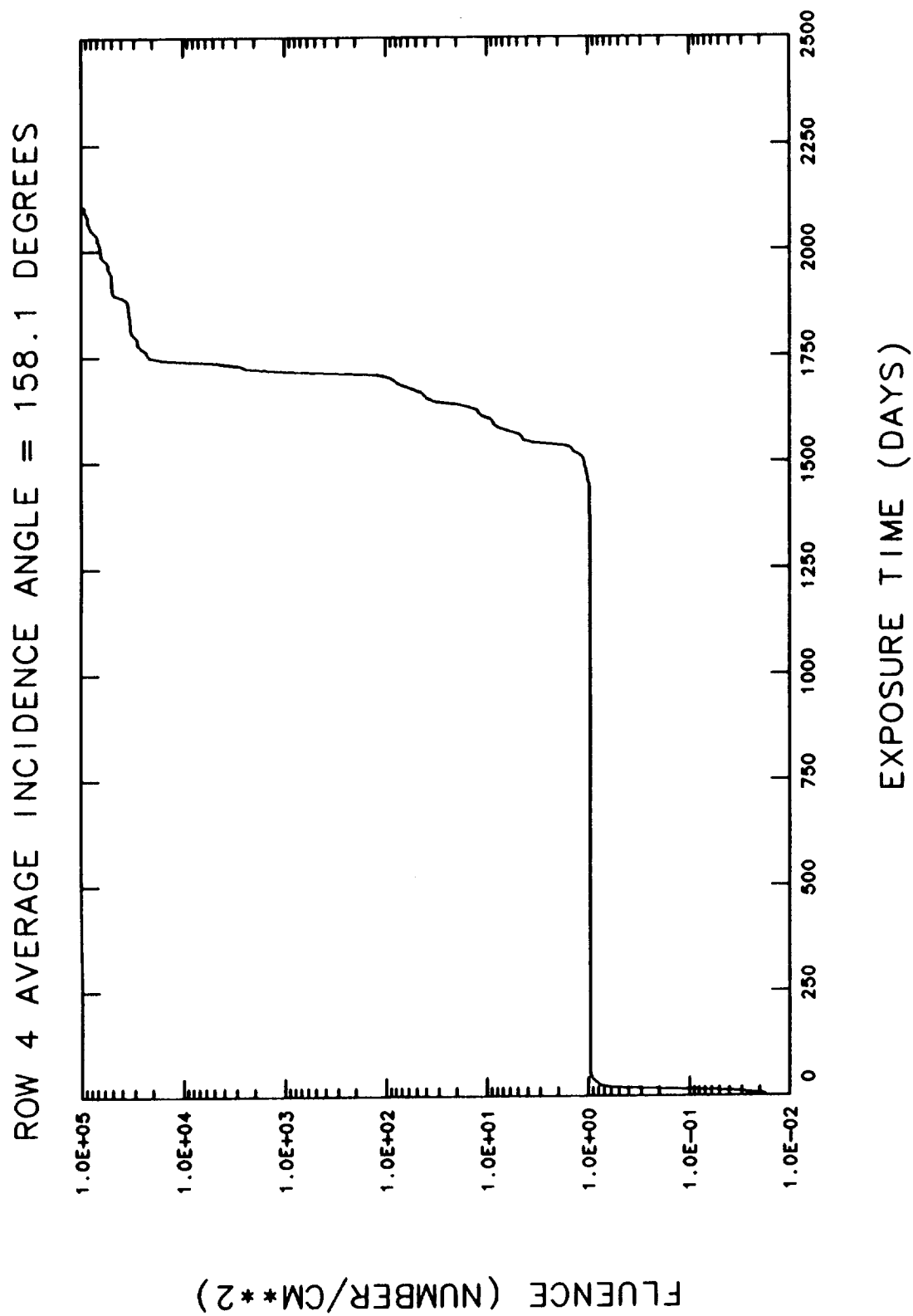


FIGURE 22. ATOMIC OXYGEN FLUENCE VS TIME FOR ROW 4.

LONGERON 4 - 5 AVERAGE INCIDENCE ANGLE = 143.1 DEGREES

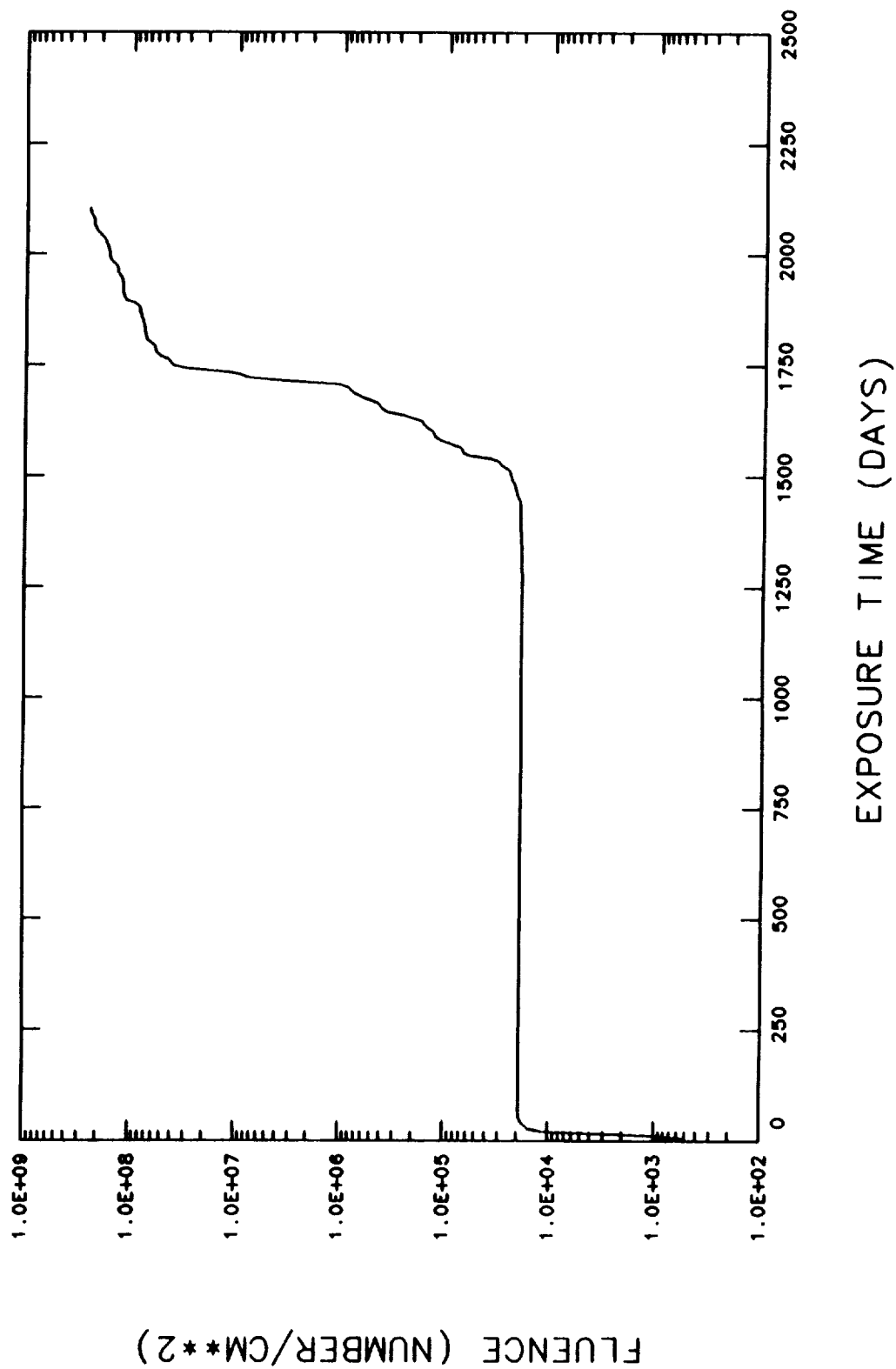


FIGURE 23. ATOMIC OXYGEN FLUENCE VS TIME FOR LONGERON 4-5.

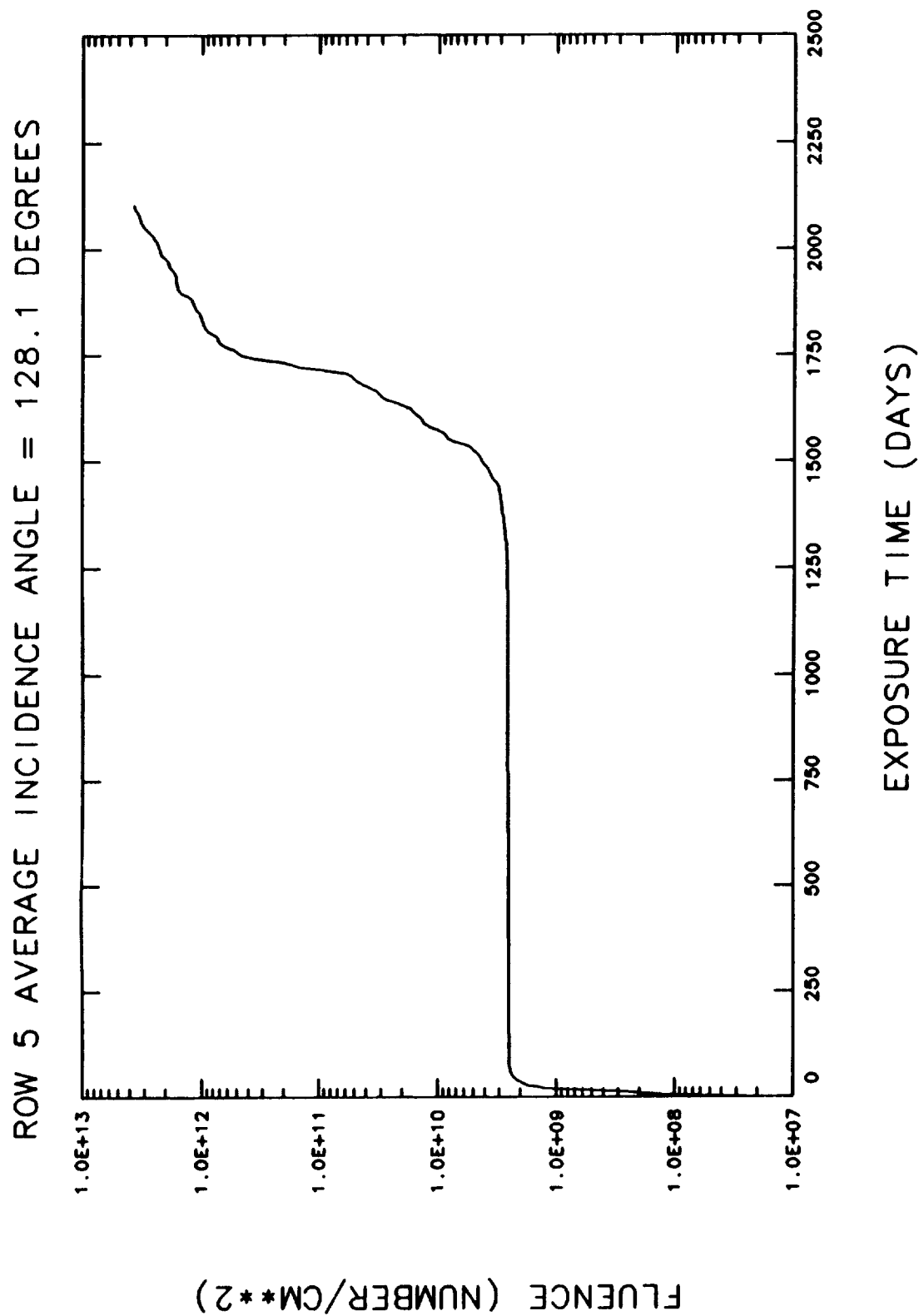


FIGURE 24. ATOMIC OXYGEN FLUENCE VS TIME FOR ROW 5.

LONGERON 5 - 6 AVERAGE INCIDENCE ANGLE = 113.1 DEGREES

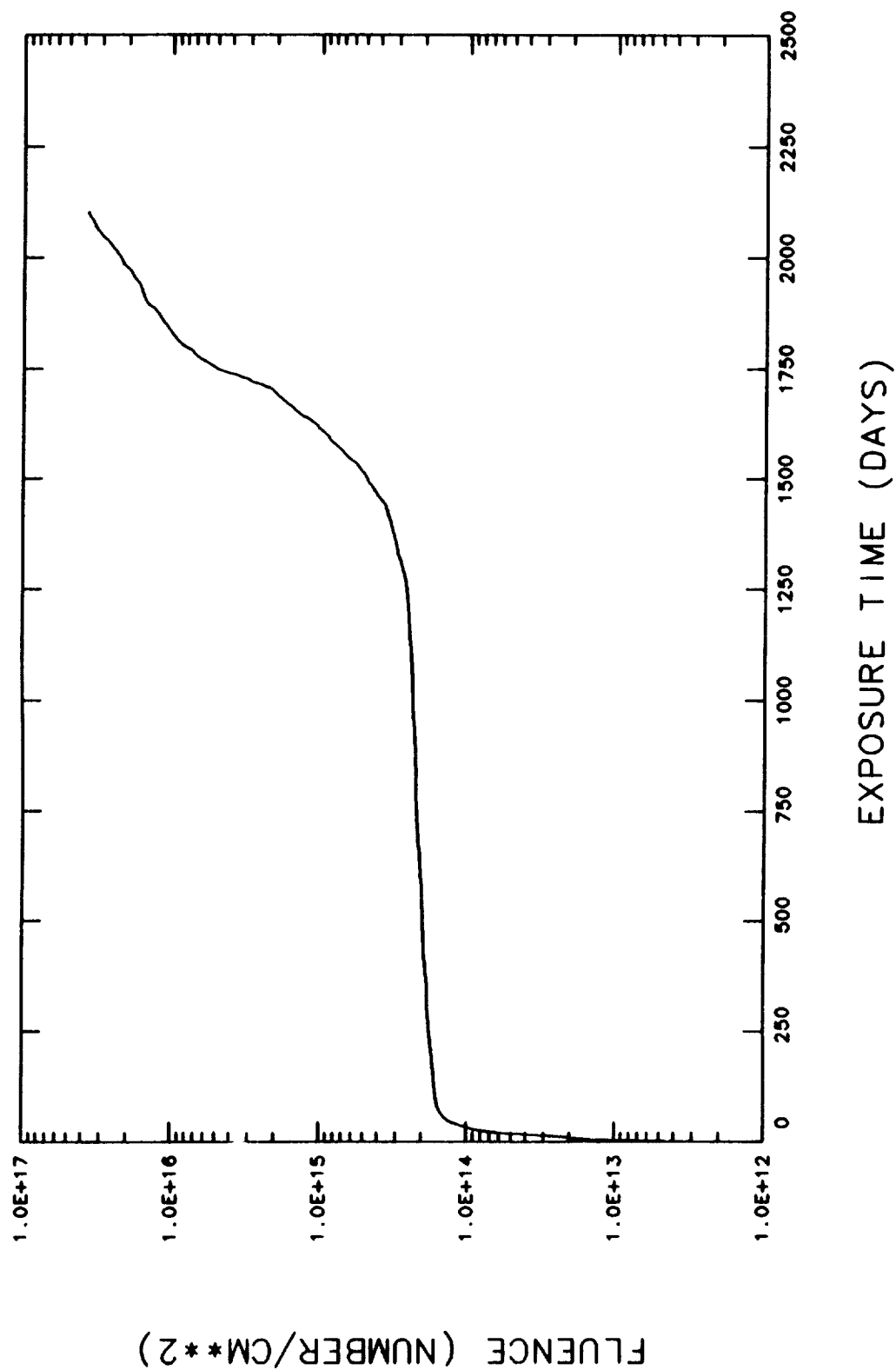


FIGURE 25. ATOMIC OXYGEN FLUENCE VS TIME FOR LONGERON 5-6.

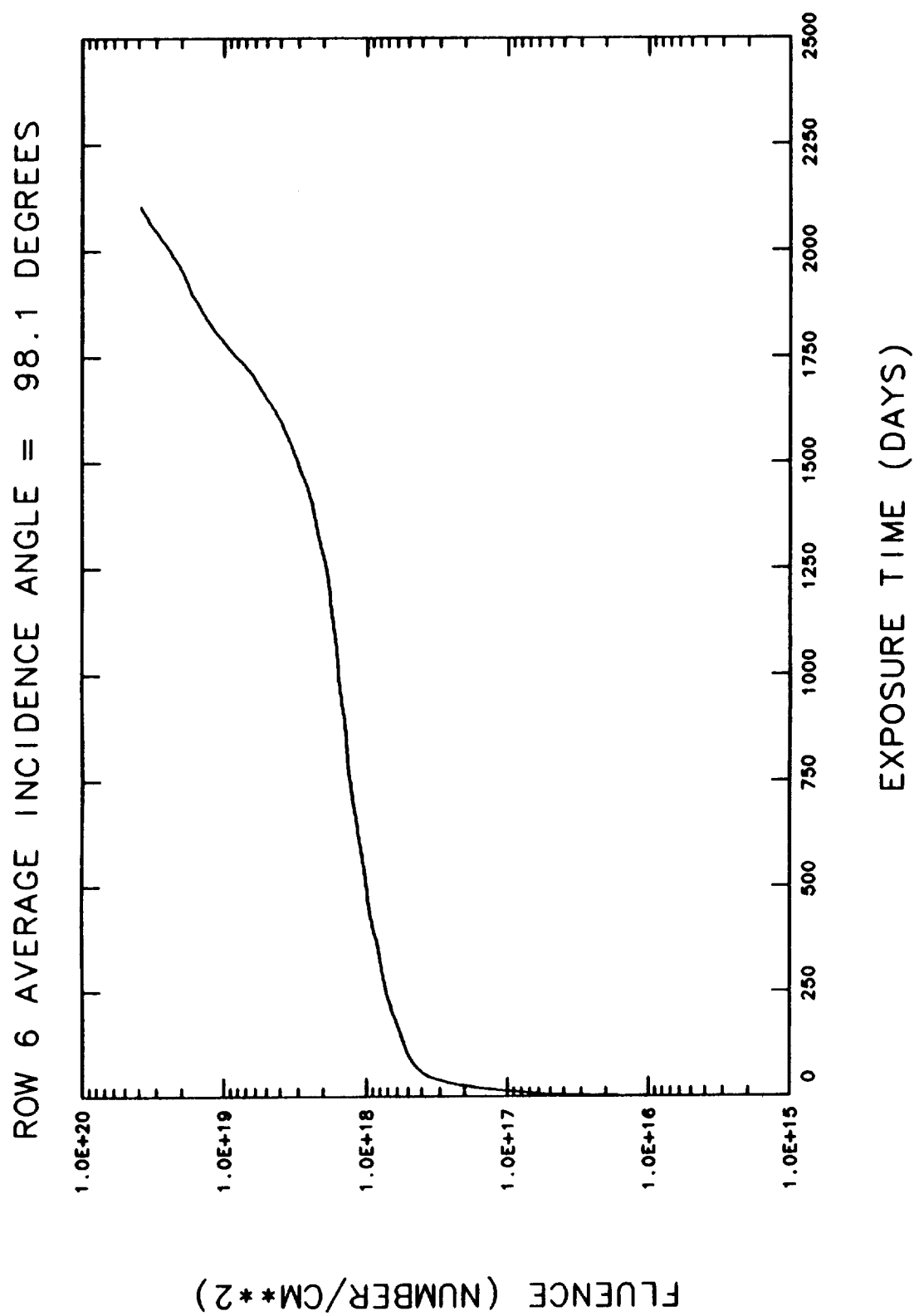


FIGURE 26. ATOMIC OXYGEN FLUENCE VS TIME FOR ROW 6.

LONGERON 6 - 7 AVERAGE INCIDENCE ANGLE = 83.1 DEGREES

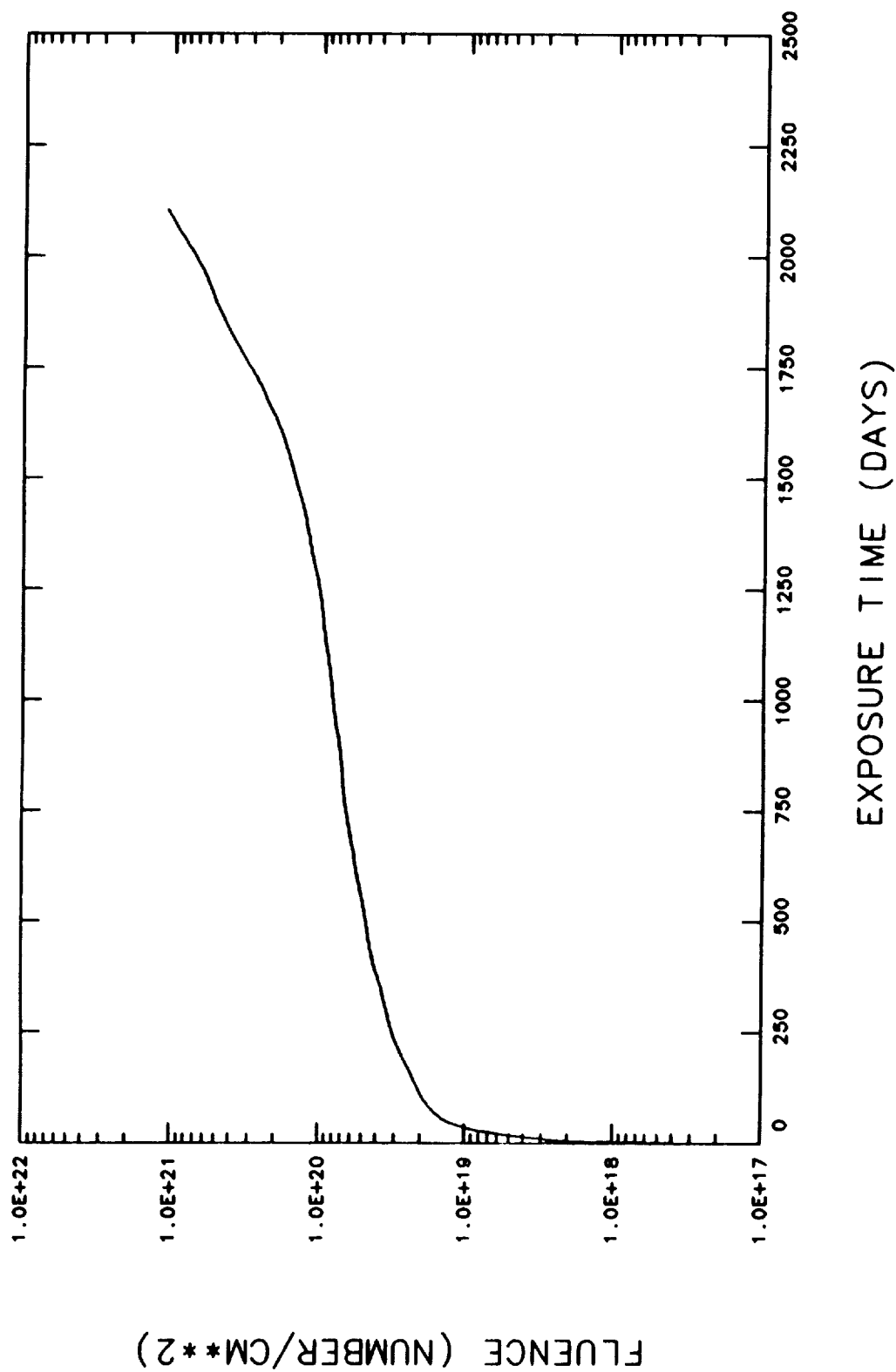


FIGURE 27. ATOMIC OXYGEN FLUENCE VS TIME FOR LONGERON 6-7.

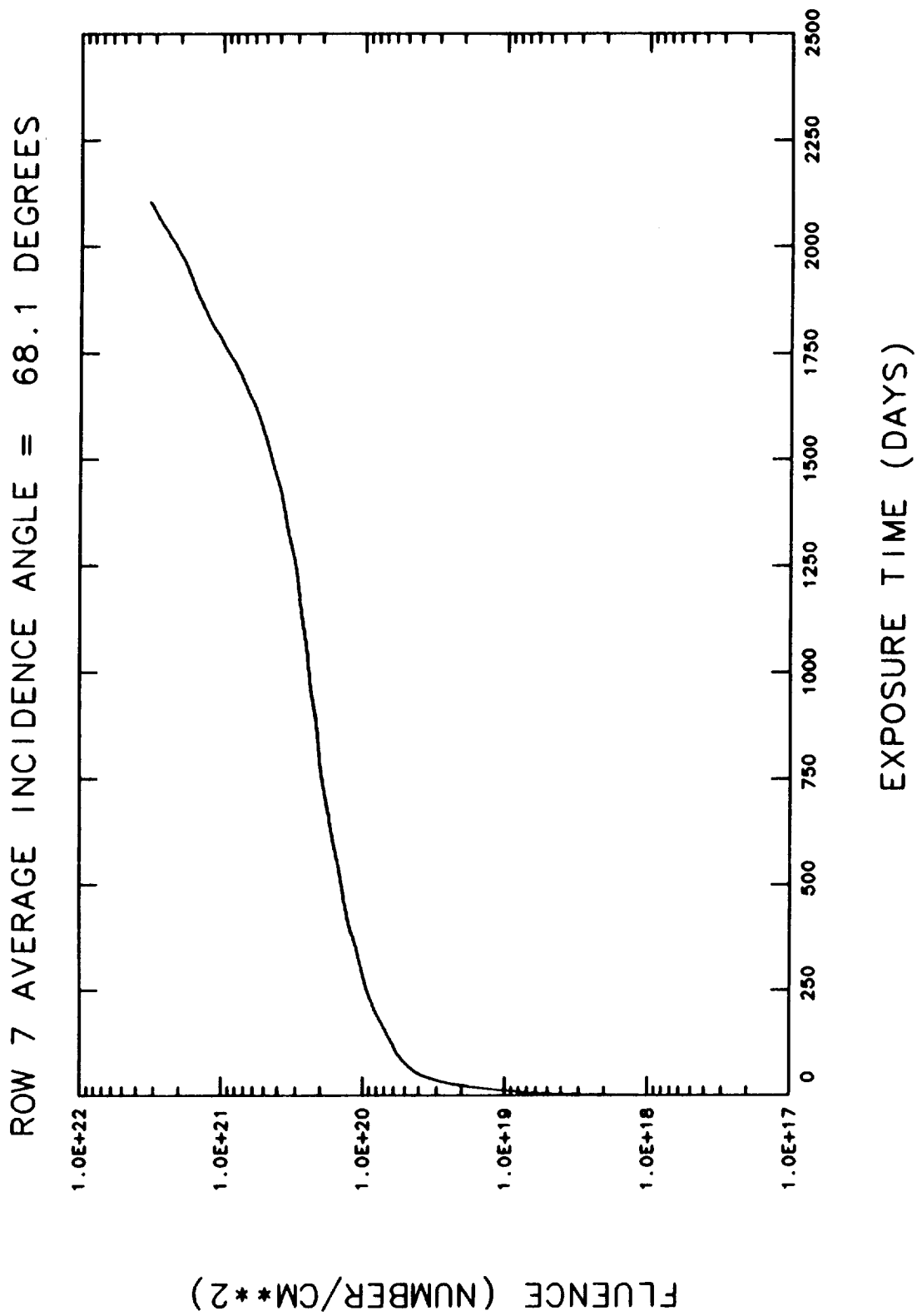


FIGURE 28. ATOMIC OXYGEN FLUENCE VS TIME FOR ROW 7.

LONGERON 7 - 8 AVERAGE INCIDENCE ANGLE = 53.1 DEGREES

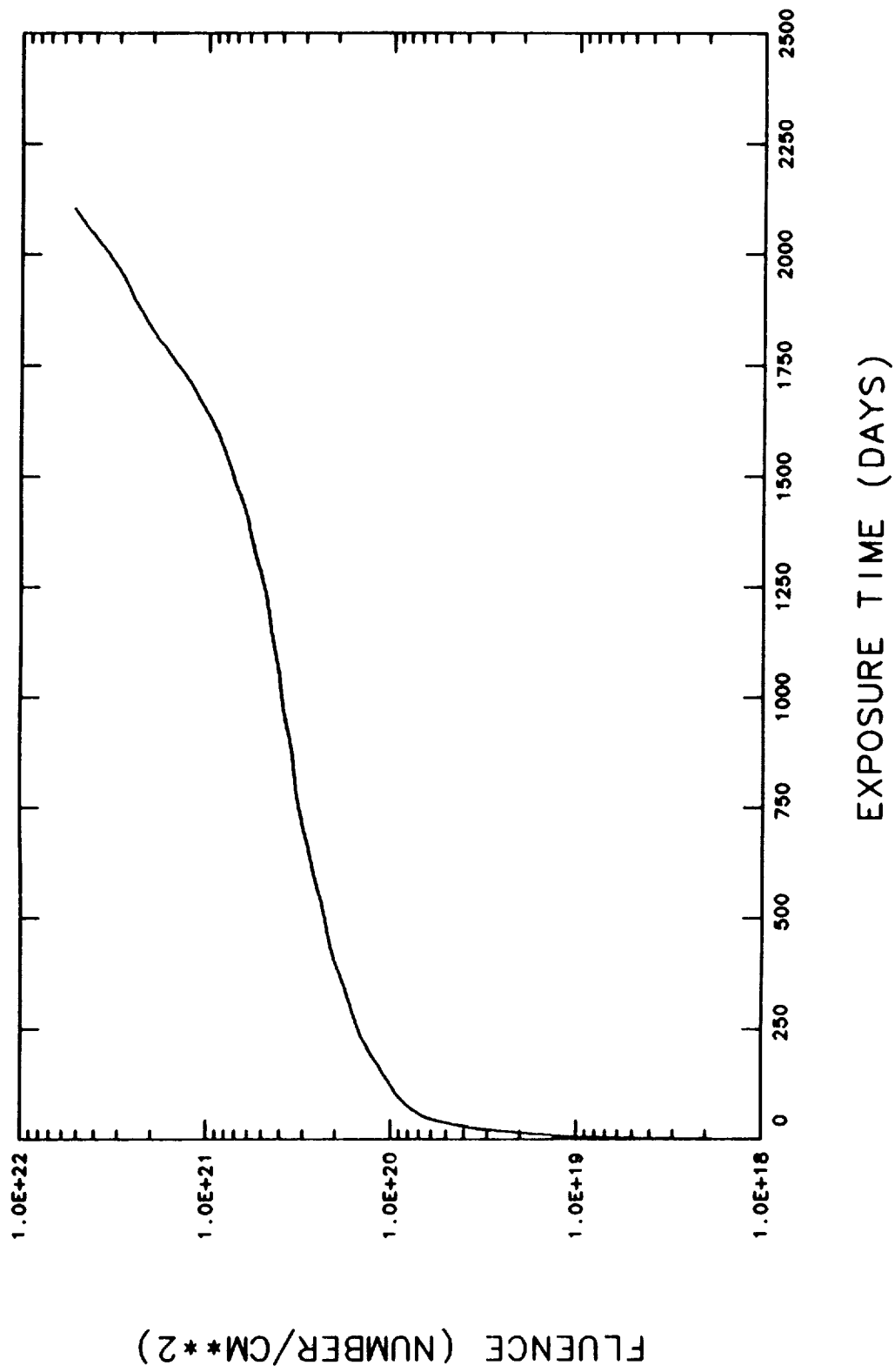


FIGURE 29. ATOMIC OXYGEN FLUENCE VS TIME FOR LONGERON 7-8.

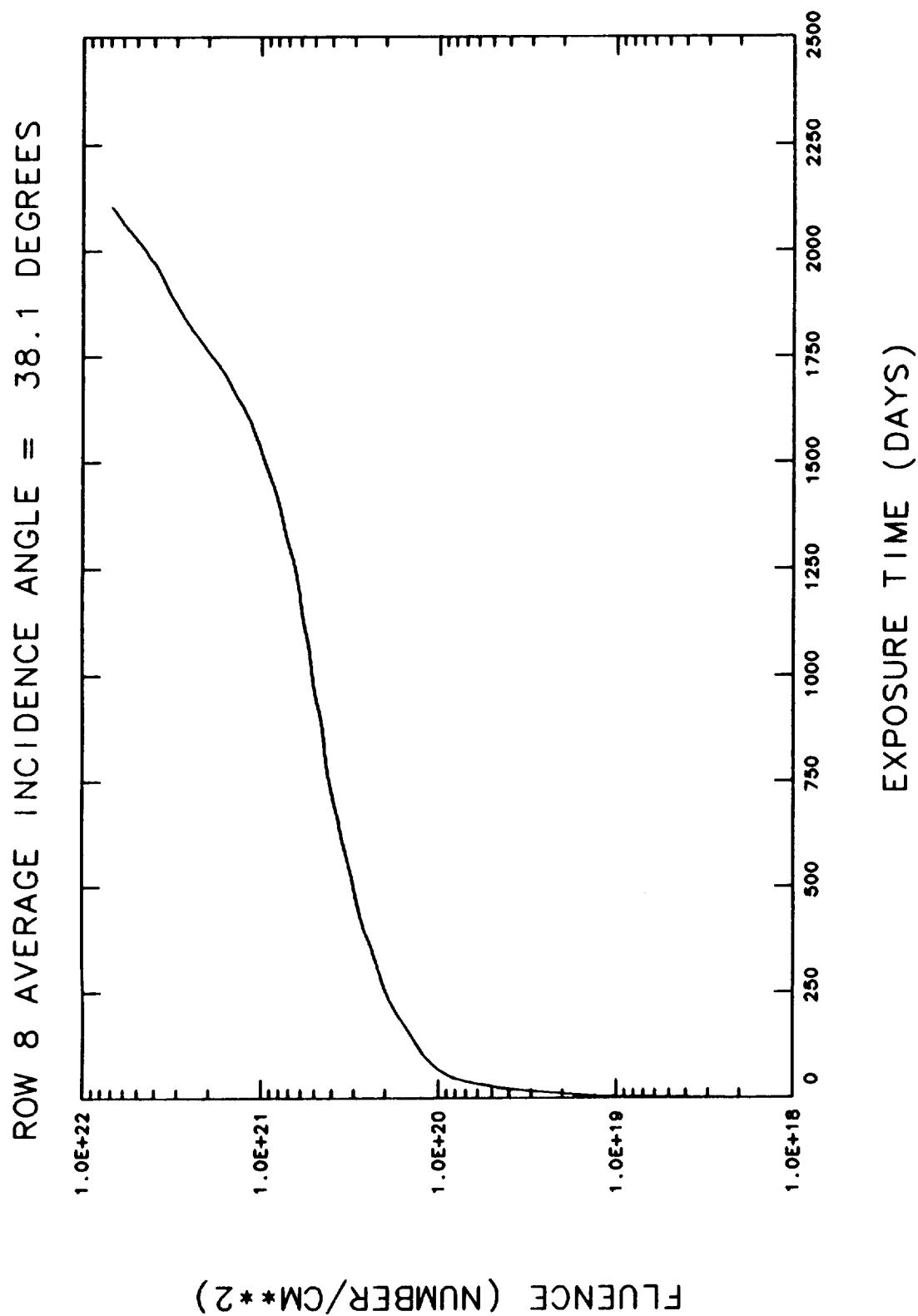


FIGURE 30. ATOMIC OXYGEN FLUENCE VS TIME FOR ROW 8.

LONGERON 8 - 9 AVERAGE INCIDENCE ANGLE = 23.1 DEGREES

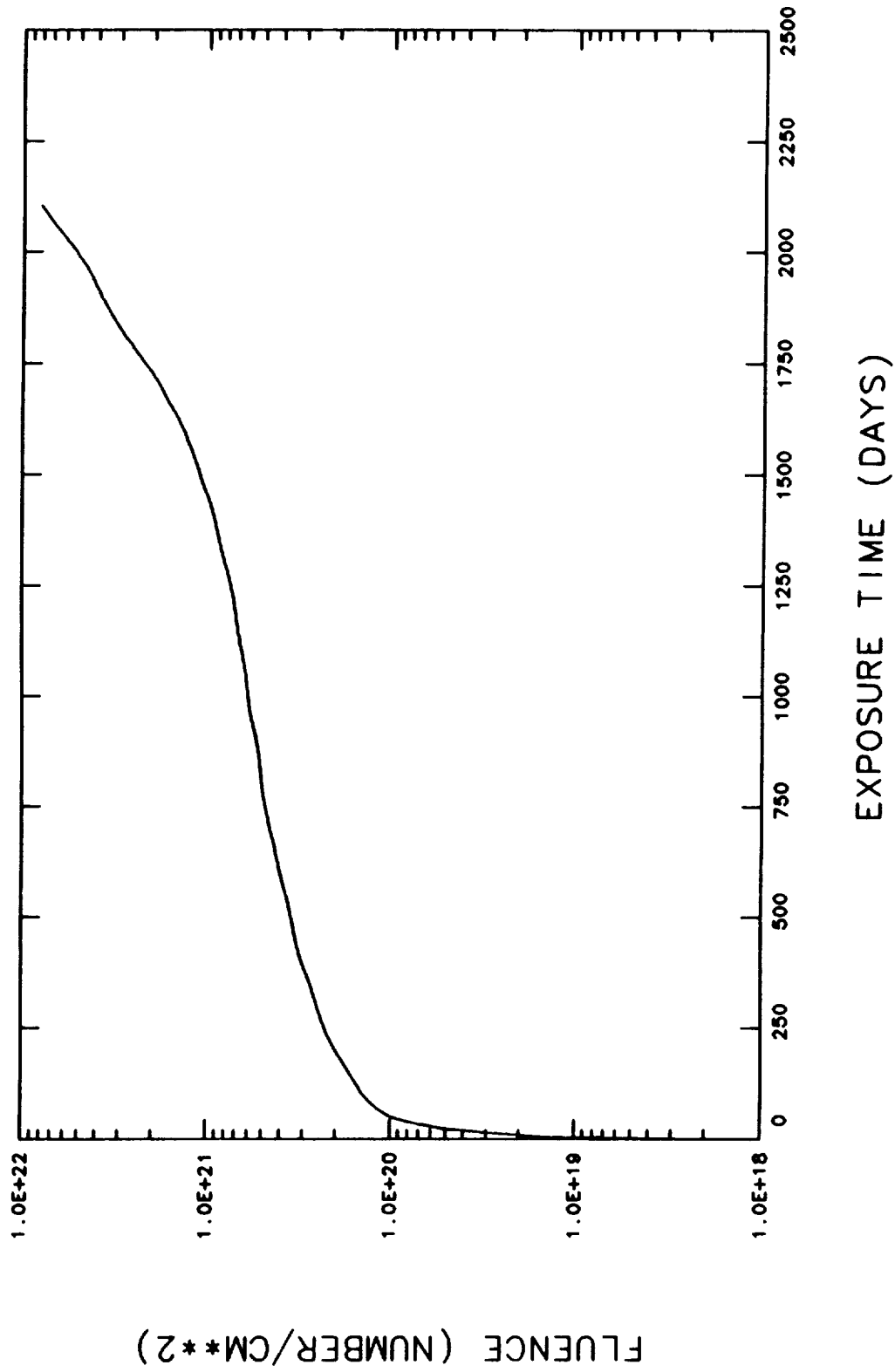


FIGURE 31. ATOMIC OXYGEN FLUENCE VS TIME FOR LONGERON 8-9.

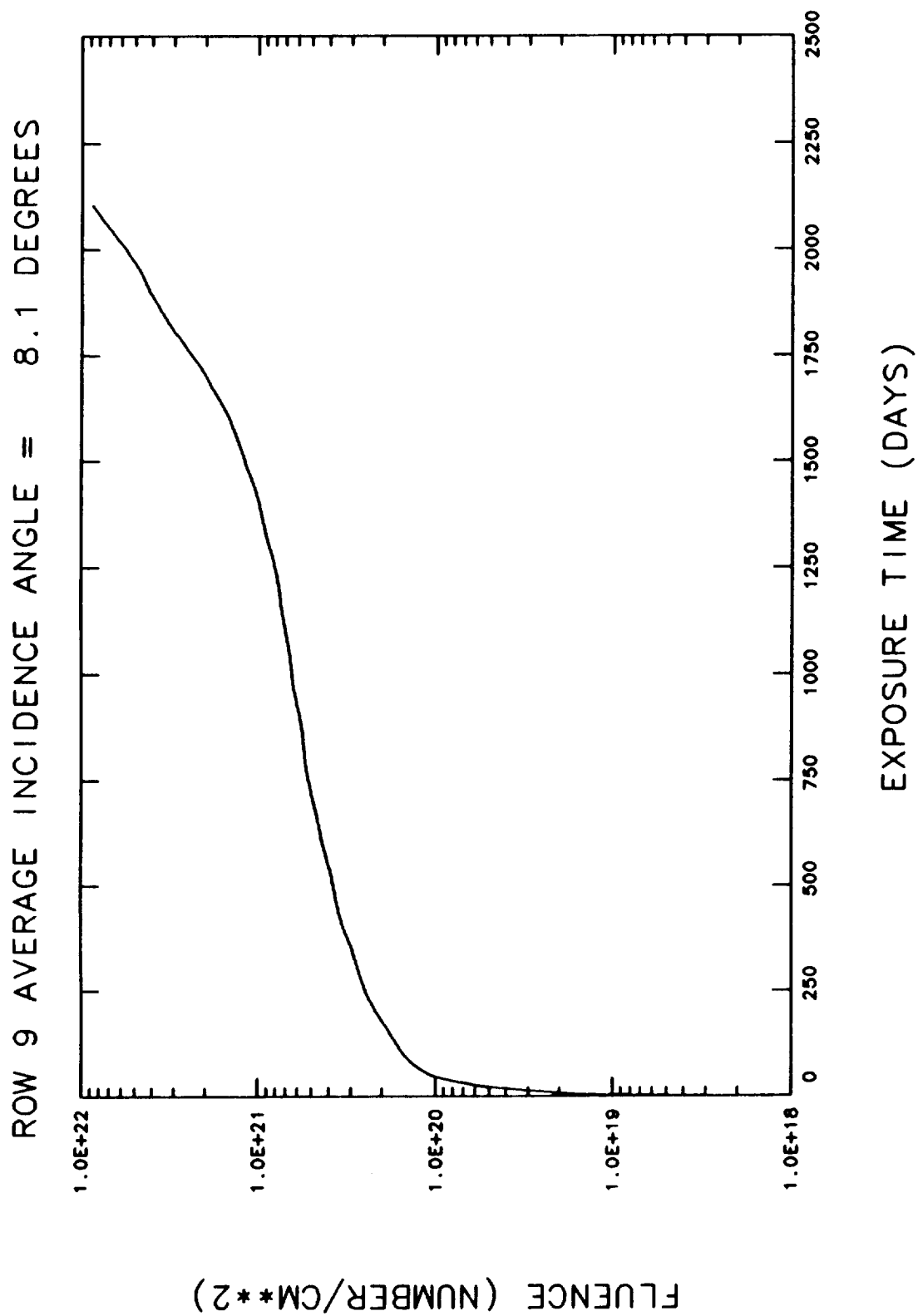


FIGURE 32. ATOMIC OXYGEN FLUENCE VS TIME FOR ROW 9.

LONGERON 9 - 10 AVERAGE INCIDENCE ANGLE = 6.9 DEGREES

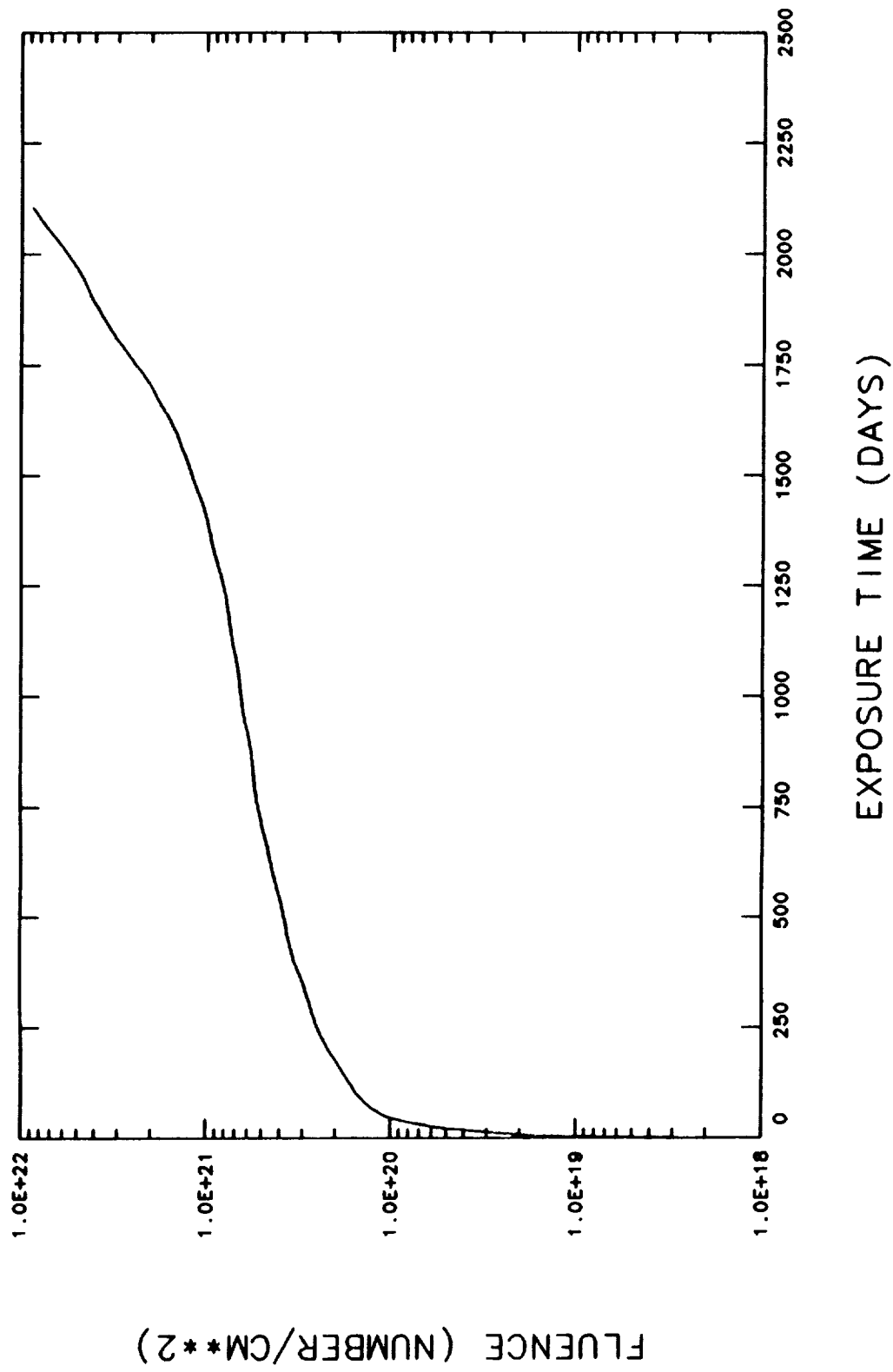


FIGURE 33. ATOMIC OXYGEN FLUENCE VS TIME FOR LONGERON 9-10.

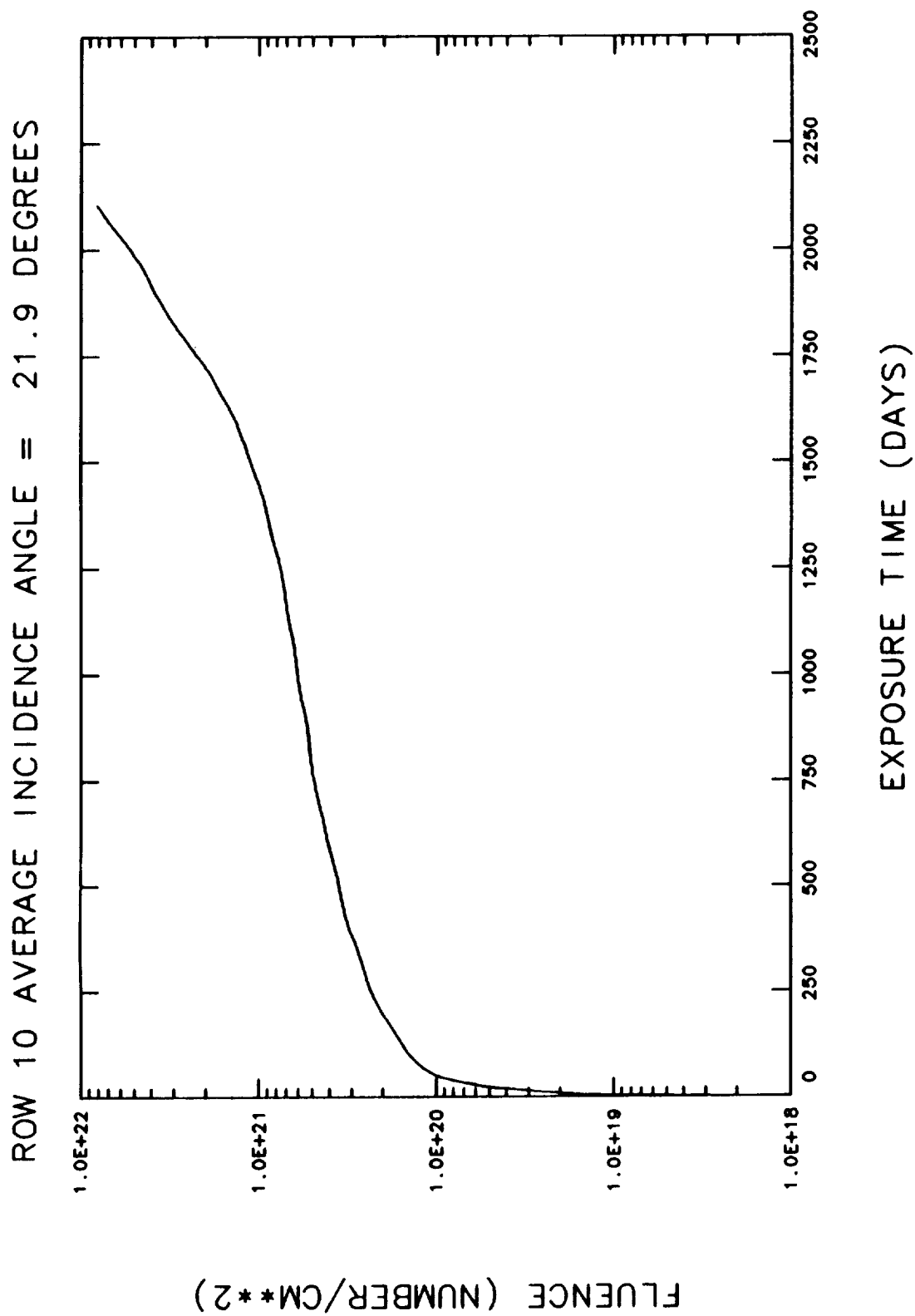


FIGURE 34. ATOMIC OXYGEN FLUENCE VS TIME FOR ROW 10.

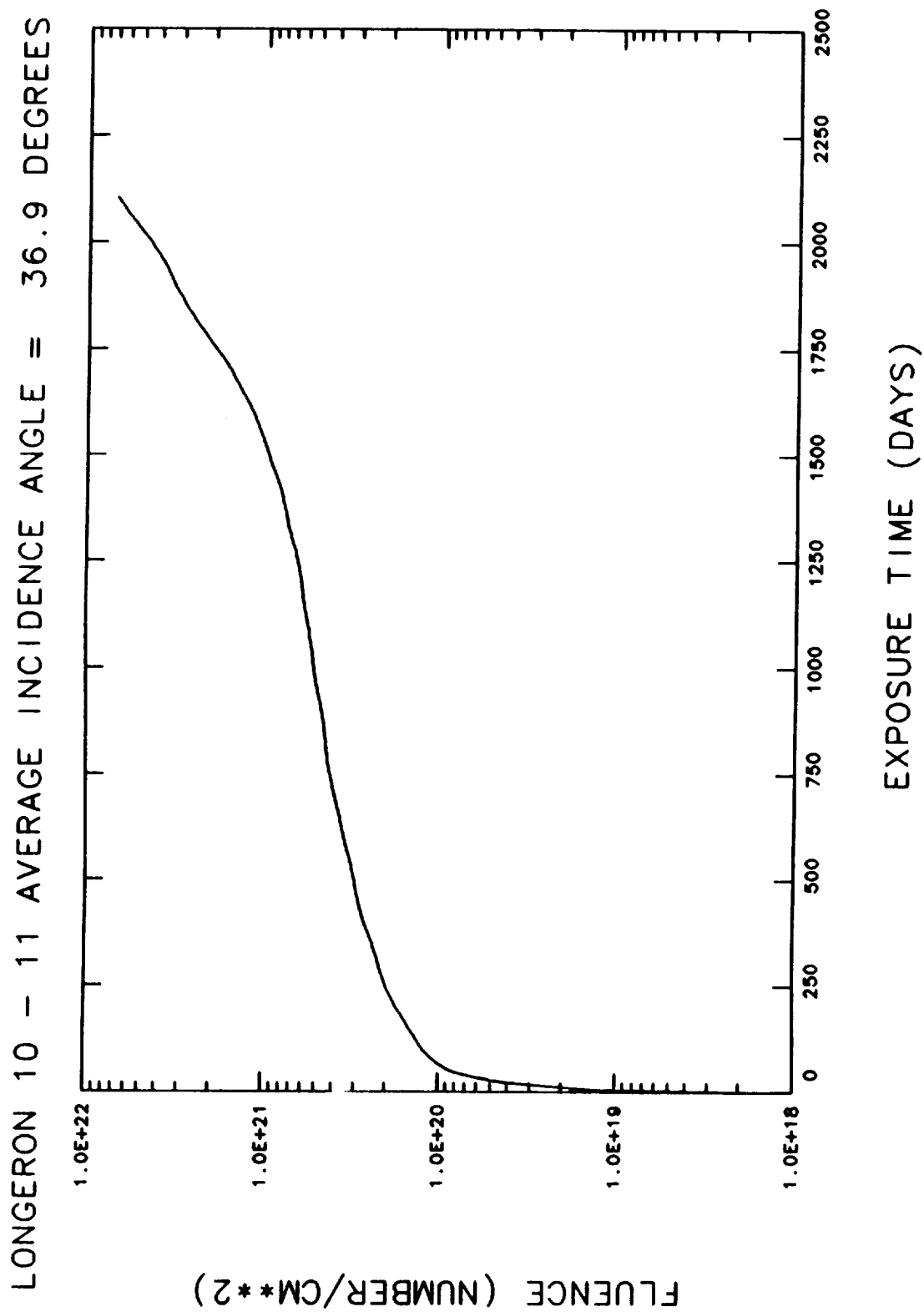


FIGURE 35. ATOMIC OXYGEN FLUENCE VS TIME FOR LONGERON 10-11.

ROW 11 AVERAGE INCIDENCE ANGLE = 51.9 DEGREES

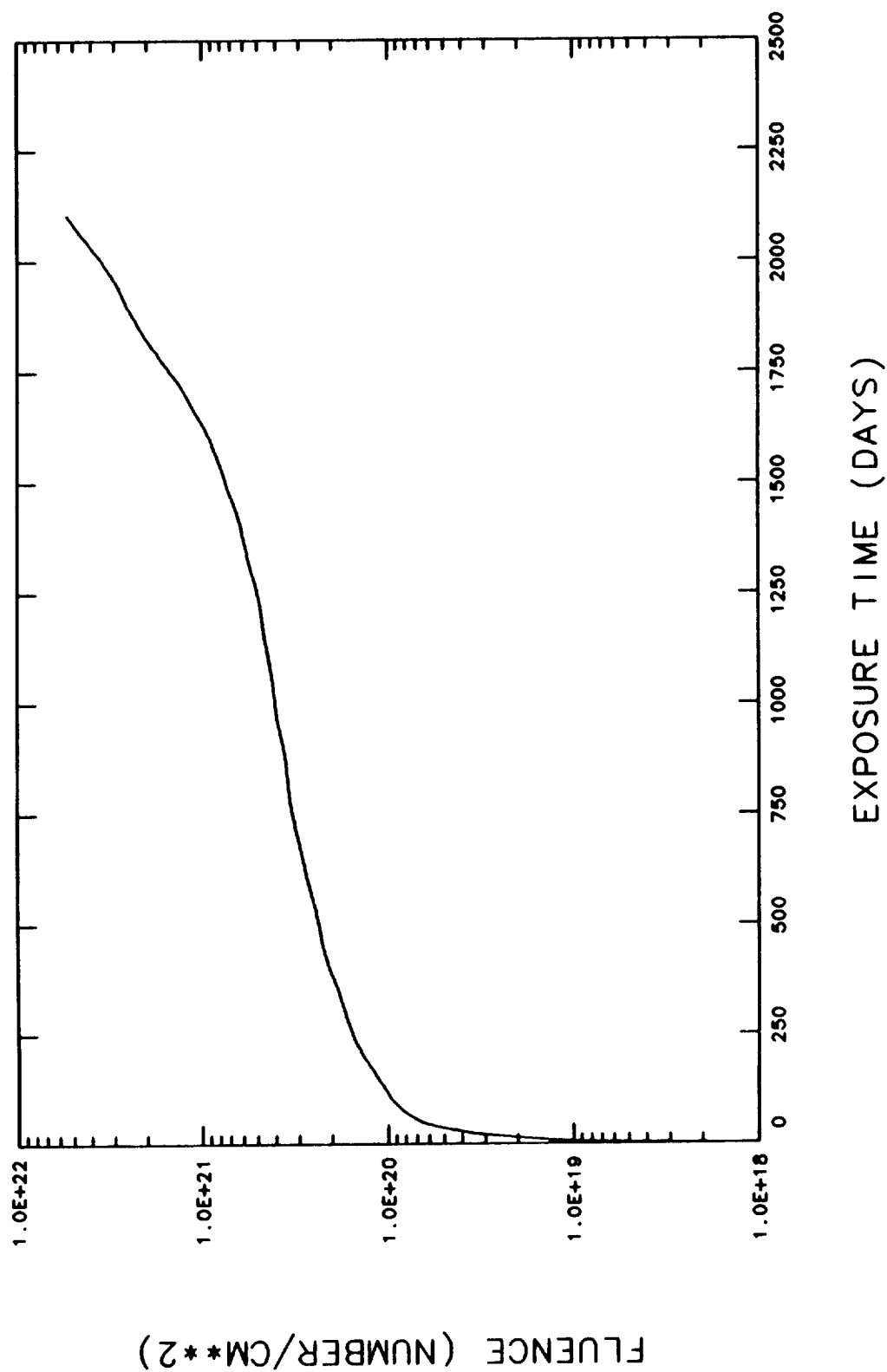


FIGURE 36. ATOMIC OXYGEN FLUENCE VS TIME FOR ROW 11.

LONGERON 11 - 12 AVERAGE INCIDENCE ANGLE = 66.9 DEGREES

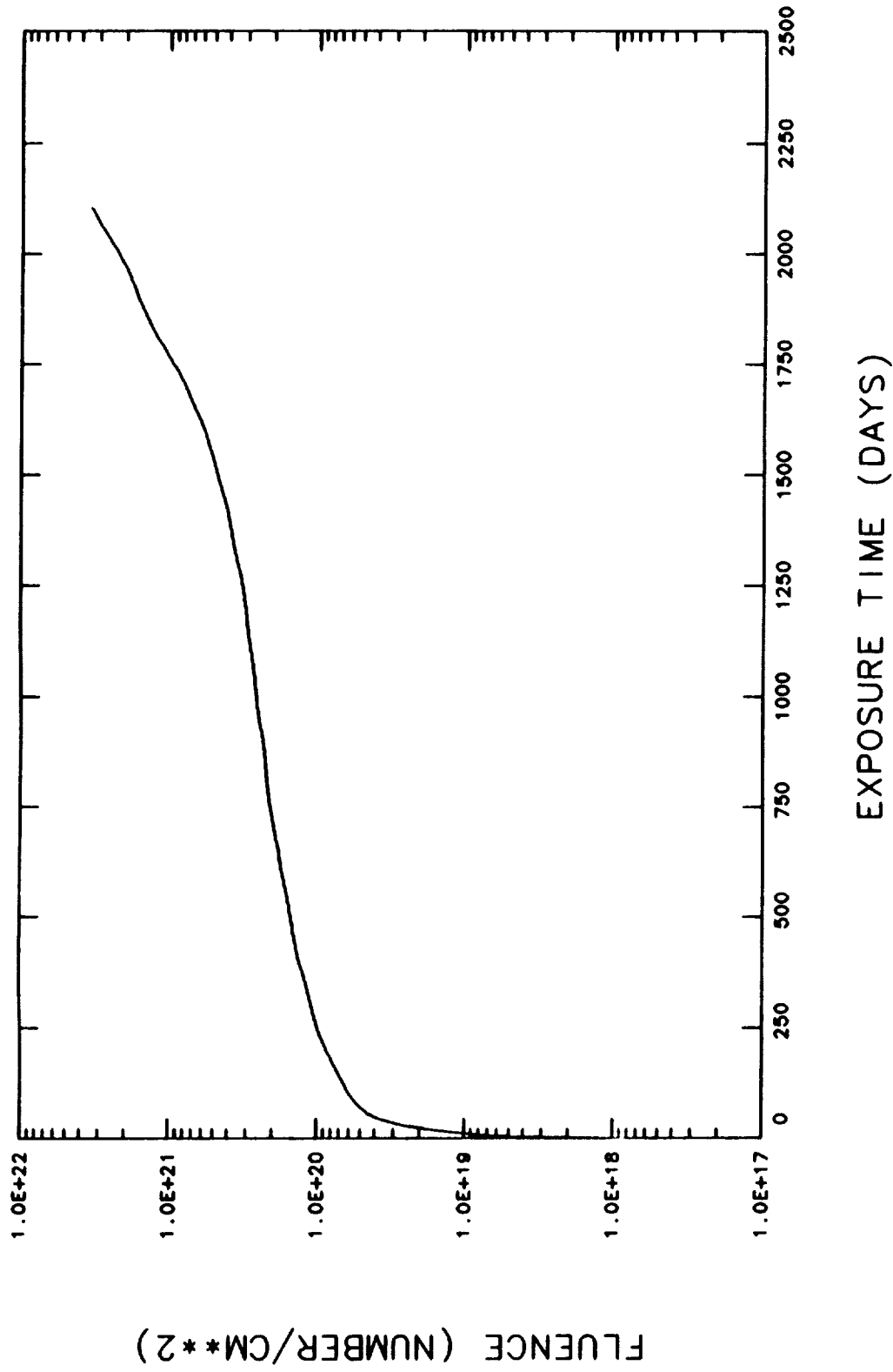


FIGURE 37. ATOMIC OXYGEN FLUENCE VS TIME FOR LONGERON 11-12.

ROW 12 AVERAGE INCIDENCE ANGLE = 81.9 DEGREES

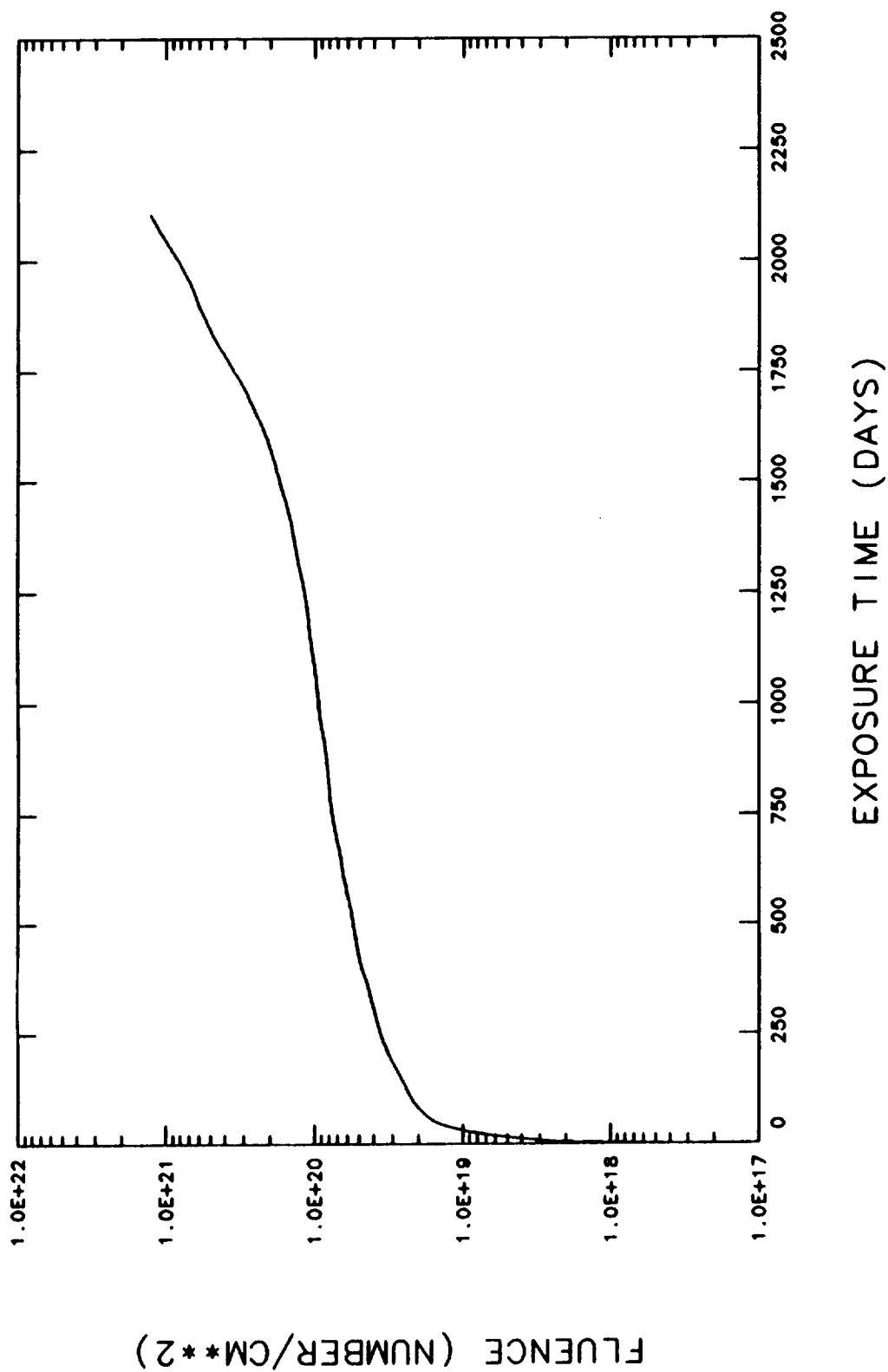


FIGURE 38. ATOMIC OXYGEN FLUENCE VS TIME FOR ROW 12.

LONGERON 12 - 1 AVERAGE INCIDENCE ANGLE = 96.9 DEGREES

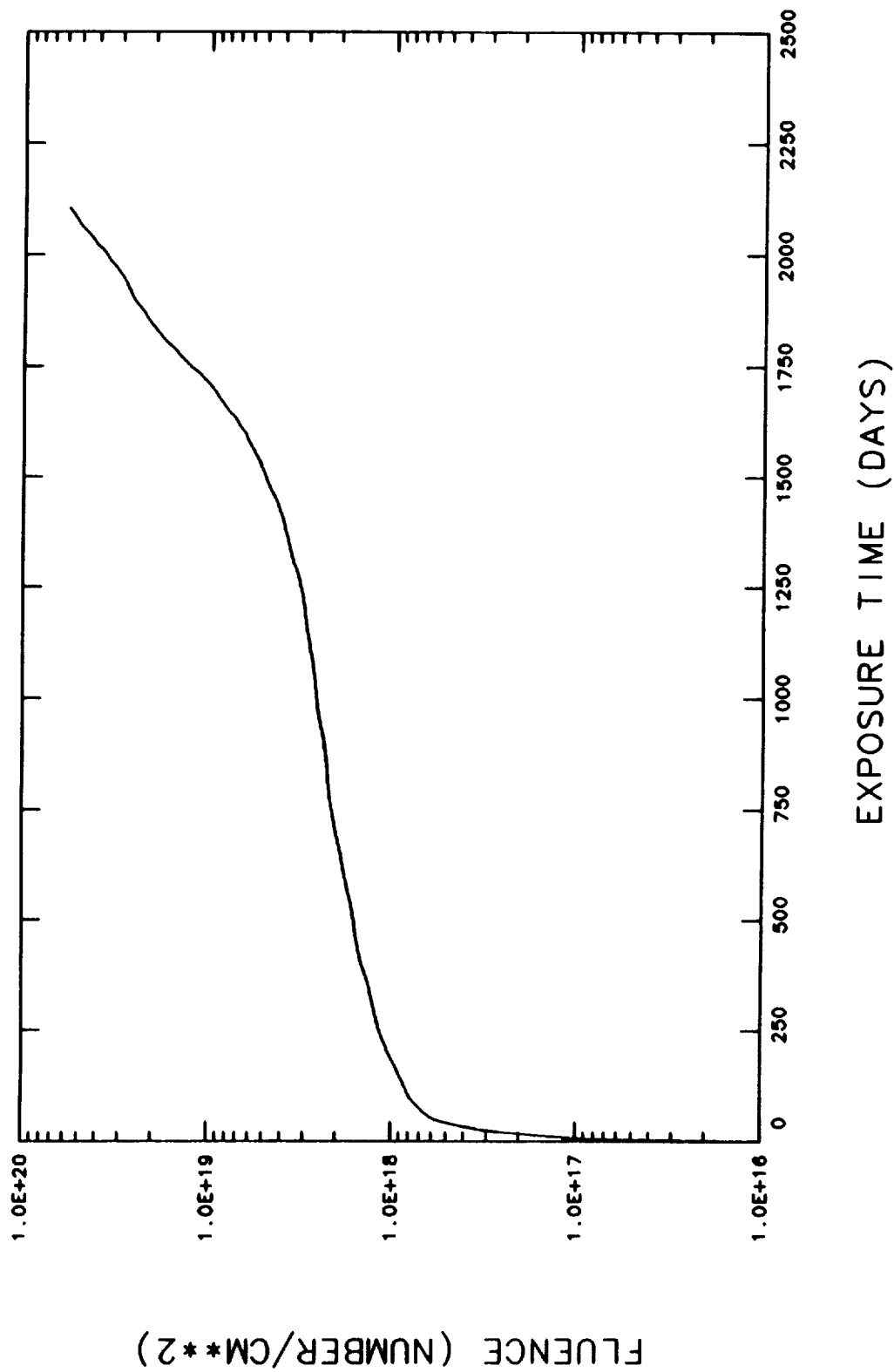


FIGURE 39. ATOMIC OXYGEN FLUENCE VS TIME FOR LONGERON 12-1.

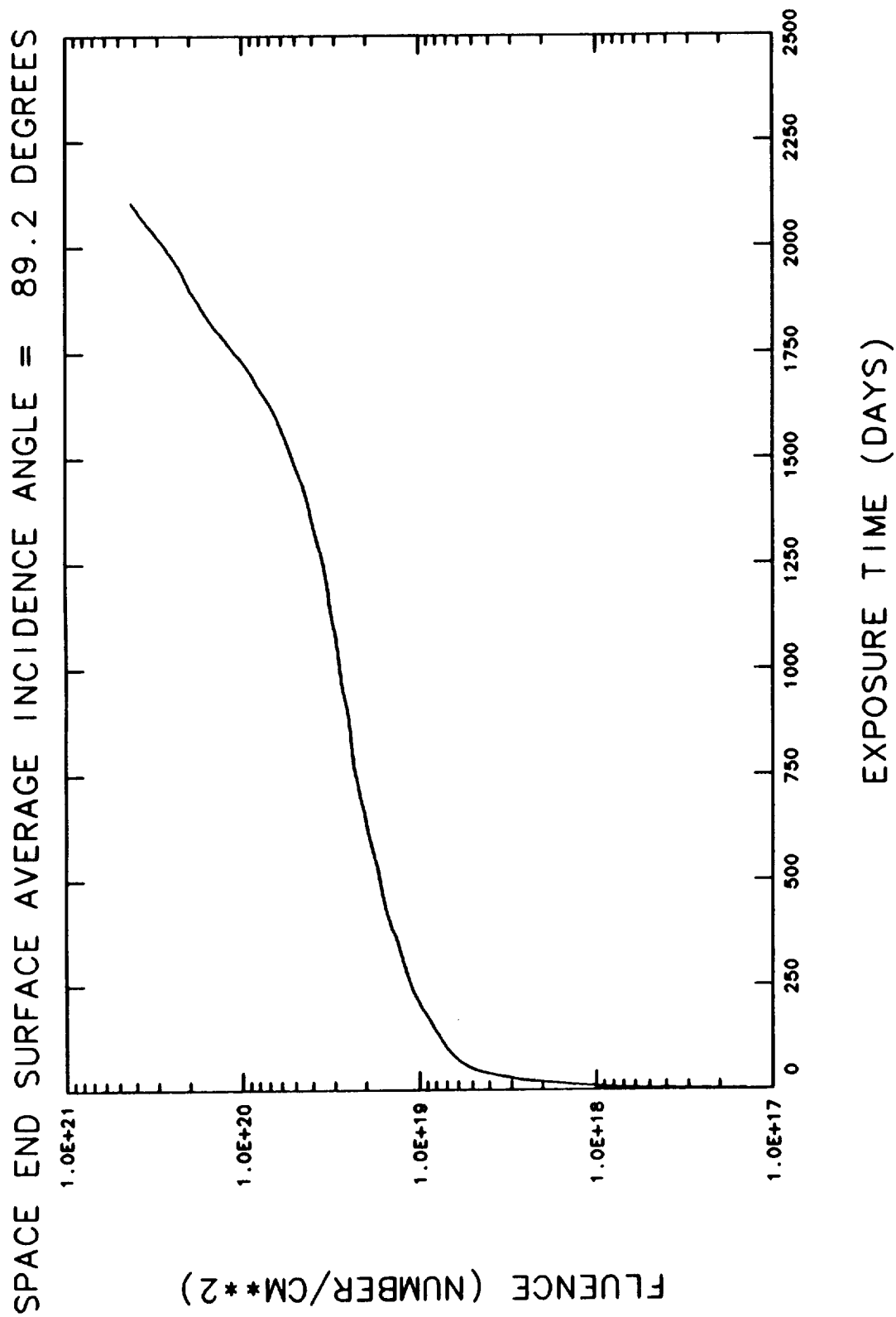


FIGURE 40. ATOMIC OXYGEN FLUENCE VS TIME FOR LDEF SPACE-END BAYS.

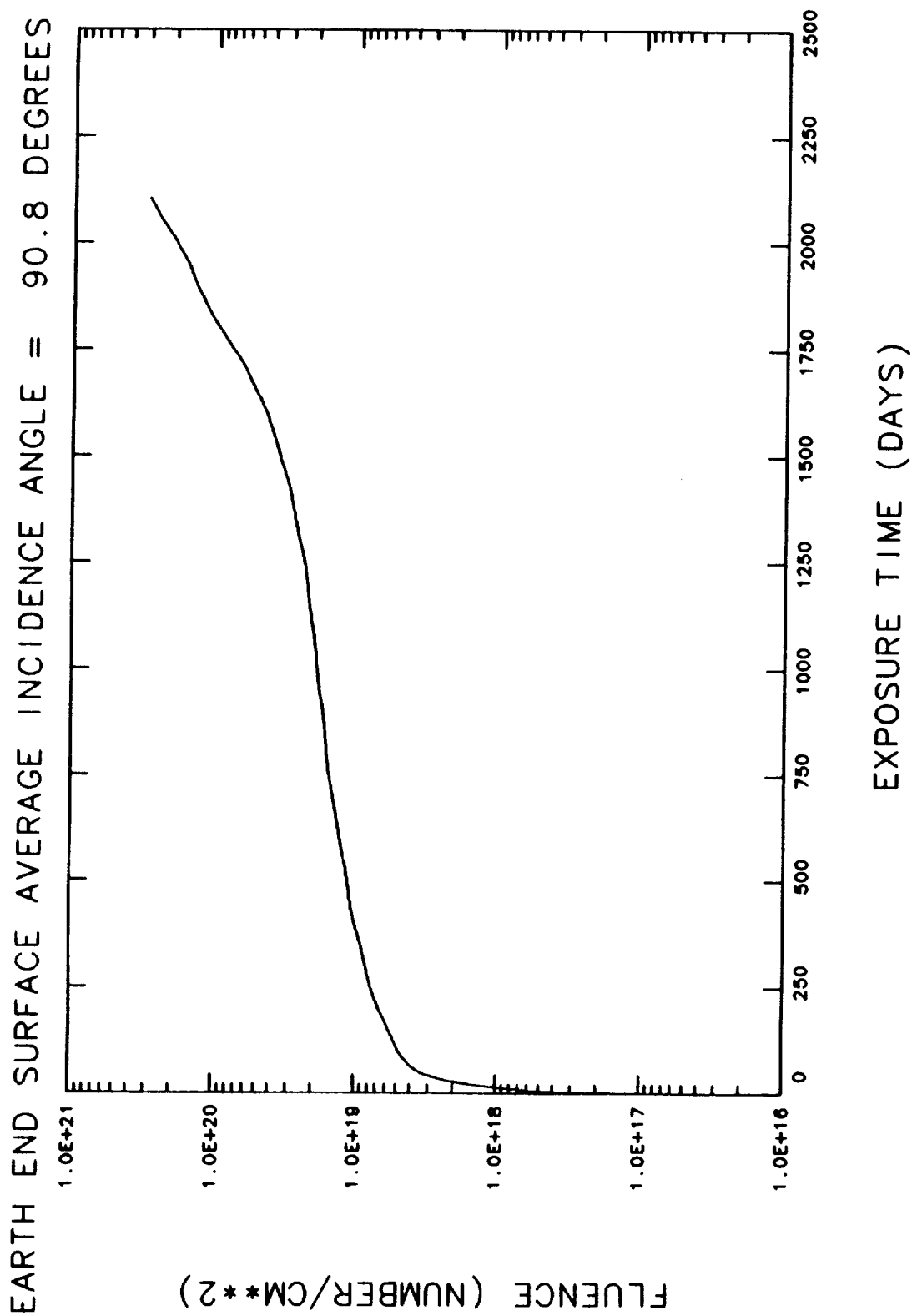


FIGURE 41. ATOMIC OXYGEN FLUENCE VS TIME FOR LDEF EARTH-END BAYS.

APPENDIX

APPENDIX ATOMIC OXYGEN EXPOSURE DATA TABLES

This appendix discusses calculated atomic oxygen exposure data for LDEF and presents a detailed tabulation of these data.

The LDEF satellite was released on April 4, 1984, at 17:26 GMT and recovered on January 12, 1990, at 15:16 GMT giving a mission duration of 2105.9 days. LDEF had a yaw of 8.1 degrees with the spacecraft turned about the x-axis so that the ram direction lies between Rows 9 and 10. Pitch angle was 0.8 degrees with the spacecraft rotated about its y-axis so that the space end of the vehicle was pitched forward. LDEF had zero roll, rotation about the z-axis.

Altitude is the distance from mean sea level on an oblate earth to an osculating orbit calculated as described in Section 5. At release LDEF was at an altitude of 475.5 km. During LDEF's first orbit after release, altitude ranged from 473.0 km to 481.0 km and average altitude was 476.1 km. This average is the mean of 16 altitudes calculated for the first orbit after release.

At recovery LDEF was at an altitude of 330.1 km. During its last orbit before recovery LDEF ranged in altitude from 329.6 km to 342.5 km and had an average altitude of 334.5 km. This altitude is the mean of 16 altitudes calculated for the last orbit before recovery.

The atomic oxygen exposure data presented are for seven day intervals throughout the mission except for the data on the first page of the tabulation, which is for the first day after release, and the data on the last page of the table, which is at recovery time. Each page of the table has the same format.

The first entry in the table is the calendar date at which the calculation of the data for that page stopped. The day of year entry refers to the number of days from the beginning of the year corresponding to the calendar date. The cumulative exposure time is the number of whole days since LDEF release. Thus, because LDEF was released April 4, 1984, at 17:26 GMT, 1 day cumulative exposure time means April 5, 1984, at 17:26 GMT. Similarly, all other calculations end at 17:26 GMT on the day indicated except for the calculation for the day of recovery, January 12, 1990, which ends at recovery time, 15:16 GMT. The cumulative exposure time has an uncertainty of -0, +5.75 minutes, the time interval for the numerical summation of fluence.

Location refers to an exposed surface of LDEF, an experiment row, a longeron between two rows, or either end of the vehicle (earth end or space end). The two number longeron identification refers to the rows between which the longeron is located. For example, longeron 1-2 refers to the longeron between rows 1 and 2.

Incidence angle is the angle between the surface normal vector and the resultant ram vector. Because of co-rotation of the atmosphere and inclination of the orbit plane, the angle between the ram and any surface normal oscillates, ± 1.86 degrees from its average value. The average incidence angle given in the tabulation is the mean of the actual incidence angles for each point on orbit. The constant incidence angle data presented in the table were calculated for true ram and sideways directions (incidence angles of 0 and 90 degrees).

The average flux for a location is the average number of atomic oxygen atoms striking a unit area of surface per unit time since the last tabulated output.

The fluence for a location is the integral of the flux with respect to time from LDEF release to the end of the calculation on each page. The integration is performed on the fluxes determined at 5.75-minute intervals for the mission rather than on the average fluxes listed in the table.

The fluence received by a surface between two dates may be calculated by subtracting the tabulated fluence for the earlier date from that for the later date. Fluences for dates not in the table may be determined by linear interpolation between tabulated values.

The average atomic oxygen density is the mean of the densities determined for all the points on orbit calculated since the last tabulated output.

The temperature and altitude ranges are the difference between the minimum and maximum of temperatures and altitudes, respectively, for all the on orbit points calculated since the last tabulated output.

The last page of the Appendix gives the total atomic oxygen fluence received during orbital flight for all external surfaces of LDEF. The values given do not include exposure of the vehicle during retrieval. A discussion of atomic oxygen exposure during retrieval is presented in Section 6.2

```

*****
* LONG DURATION EXPOSURE FACILITY (LDEF) *
* ATOMIC OXYGEN FLUX CALCULATION *
* SPACECRAFT RELEASE DATE: APRIL 7, 1984 *
* SPACECRAFT RECOVERY DATE: JANUARY 12, 1990 *
* *
* DATE OF COMPUTATION: 1992-02-10 15:29:33 *
*****

```

SATELLITE ORIENTATION IS

```

    YAW  =      8.10 DEGREES
    PITCH =      .80 DEGREES
    ROLL  =      0.00 DEGREES
YAW  = ROTATION ABOUT SATELLITE X AXIS (VERTICAL UP POSITIVE)
PITCH = ROTATION ABOUT SATELLITE Y AXIS (SIDE AXIS)
ROLL  = ROTATION ABOUT SATELLITE Z AXIS (RAM DIRECTION POSTIVE)

```

REFERENCE DATE IS YEAR 84 MONTH 1 DAY 1

STARTING DATE OF MISSION YEAR 84 MONTH 4 DAY 7.726
 DAYS FROM REFERENCE DATE 98.726

ENDING DATE OF MISSION YEAR 90 MONTH 1 DAY 12.636
 DAYS FROM REFERENCE DATE 2204.636

ATOMIC OXYGEN FLUENCES WILL BE CALCULATED EVERY 7 DAYS

```

*****
*DATE:      APRIL   8, 1984      DAY OF YEAR:   99 *
*CUMULATIVE EXPOSURE TIME:      1 DAYS          *
*****

```

AVERAGES AND RANGES ARE BASED ON 251 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	8.28E+07	7.18E+12
LONGERON	126.9	1.37E+03	1.19E+08
ROW 2	141.9	6.01E-03	5.21E+02
LONGERON	156.9	1.31E-07	1.14E-02
ROW 3	171.9	2.16E-10	1.87E-05
LONGERON	173.1	1.36E-10	1.18E-05
ROW 4	158.1	3.55E-08	3.08E-03
LONGERON	143.1	9.52E-04	8.26E+01
ROW 5	128.1	2.26E+02	1.96E+07
LONGERON	113.1	2.67E+07	2.31E+12
ROW 6	98.1	9.65E+10	8.37E+15
LONGERON	83.1	3.53E+12	3.06E+17
ROW 7	68.1	1.05E+13	9.08E+17
LONGERON	53.1	1.69E+13	1.46E+18
ROW 8	38.1	2.21E+13	1.92E+18
LONGERON	23.1	2.59E+13	2.24E+18
ROW 9	8.1	2.78E+13	2.41E+18
LONGERON	6.9	2.79E+13	2.42E+18
ROW 10	21.9	2.61E+13	2.26E+18
LONGERON	36.9	2.25E+13	1.95E+18
ROW 11	51.9	1.74E+13	1.50E+18
LONGERON	66.9	1.10E+13	9.55E+17
ROW 12	81.9	4.06E+12	3.52E+17
LONGERON	96.9	1.54E+11	1.34E+16
SPACE END	89.2	1.30E+12	1.13E+17
EARTH END	-90.8	9.11E+11	7.89E+16

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	2.81E+13	2.44E+18
SIDE DIR	90.0	1.09E+12	9.48E+16

AVERAGE ATOMIC OXYGEN DENSITY: 3.68E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 838.7 TO 1242.8 K
 ALTITUDE RANGE: 472.9 TO 481.1 KM

 *DATE: APRIL 14, 1984 DAY OF YEAR: 105 *
 *CUMULATIVE EXPOSURE TIME: 7 DAYS *

AVERAGES AND RANGES ARE BASED ON 1500 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	6.08E+07	3.87E+13
LONGERON	126.9	7.89E+02	5.28E+08
ROW 2	141.9	2.95E-03	2.05E+03
LONGERON	156.9	6.36E-08	4.43E-02
ROW 3	171.9	1.19E-10	8.02E-05
LONGERON	173.1	9.00E-11	5.85E-05
ROW 4	158.1	2.81E-08	1.76E-02
LONGERON	143.1	8.23E-04	5.09E+02
ROW 5	128.1	1.91E+02	1.18E+08
LONGERON	113.1	2.17E+07	1.36E+13
ROW 6	98.1	8.38E+10	5.18E+16
LONGERON	83.1	3.18E+12	1.95E+18
ROW 7	68.1	9.45E+12	5.81E+18
LONGERON	53.1	1.52E+13	9.35E+18
ROW 8	38.1	1.99E+13	1.23E+19
LONGERON	23.1	2.33E+13	1.43E+19
ROW 9	8.1	2.51E+13	1.54E+19
LONGERON	6.9	2.52E+13	1.55E+19
ROW 10	21.9	2.35E+13	1.44E+19
LONGERON	36.9	2.03E+13	1.25E+19
ROW 11	51.9	1.56E+13	9.61E+18
LONGERON	66.9	9.94E+12	6.11E+18
ROW 12	81.9	3.66E+12	2.25E+18
LONGERON	96.9	1.34E+11	8.28E+16
SPACE END	89.2	1.16E+12	7.15E+17
EARTH END	-90.8	8.11E+11	4.99E+17

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	2.53E+13	1.56E+19
SIDE DIR	90.0	9.76E+11	6.01E+17

AVERAGE ATOMIC OXYGEN DENSITY: 3.32E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 820.4 TO 1234.4 K
 ALTITUDE RANGE: 472.7 TO 481.9 KM

 *DATE: APRIL 21, 1984 DAY OF YEAR: 112 *
 *CUMULATIVE EXPOSURE TIME: 14 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.64E+07	6.07E+13
LONGERON	126.9	2.79E+02	6.96E+08
ROW 2	141.9	8.24E-04	2.55E+03
LONGERON	156.9	2.17E-08	5.75E-02
ROW 3	171.9	6.34E-11	1.19E-04
LONGERON	173.0	7.82E-11	1.06E-04
ROW 4	158.1	3.52E-08	3.89E-02
LONGERON	143.1	1.21E-03	1.24E+03
ROW 5	128.1	2.48E+02	2.69E+08
LONGERON	113.1	2.06E+07	2.61E+13
ROW 6	98.1	7.17E+10	9.51E+16
LONGERON	83.1	2.79E+12	3.64E+18
ROW 7	68.1	8.31E+12	1.08E+19
LONGERON	53.1	1.34E+13	1.74E+19
ROW 8	38.1	1.75E+13	2.28E+19
LONGERON	23.1	2.05E+13	2.67E+19
ROW 9	8.1	2.20E+13	2.87E+19
LONGERON	7.0	2.21E+13	2.88E+19
ROW 10	21.9	2.06E+13	2.69E+19
LONGERON	36.9	1.78E+13	2.32E+19
ROW 11	51.9	1.37E+13	1.79E+19
LONGERON	66.9	8.73E+12	1.14E+19
ROW 12	81.9	3.20E+12	4.18E+18
LONGERON	96.9	1.11E+11	1.50E+17
SPACE END	89.2	1.01E+12	1.33E+18
EARTH END	-90.8	7.03E+11	9.24E+17

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	2.23E+13	2.90E+19
SIDE DIR	90.0	8.48E+11	1.11E+18

AVERAGE ATOMIC OXYGEN DENSITY: 2.92E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 813.3 TO 1199.1 K
 ALTITUDE RANGE: 472.7 TO 482.1 KM

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*DATE:      APRIL 28, 1984      DAY OF YEAR: 119 *
*CUMULATIVE EXPOSURE TIME: 21 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	8.38E+07	1.11E+14
LONGERON	126.9	1.32E+03	1.50E+09
ROW 2	141.9	9.39E-03	8.23E+03
LONGERON	156.9	5.08E-07	3.65E-01
ROW 3	171.9	2.23E-09	1.47E-03
LONGERON	173.0	2.83E-09	1.82E-03
ROW 4	158.1	9.03E-07	5.85E-01
LONGERON	143.1	1.66E-02	1.13E+04
ROW 5	128.1	1.59E+03	1.23E+09
LONGERON	113.1	5.90E+07	6.18E+13
ROW 6	98.1	1.11E+11	1.62E+17
LONGERON	83.1	3.67E+12	5.86E+18
ROW 7	68.1	1.08E+13	1.74E+19
LONGERON	53.1	1.74E+13	2.80E+19
ROW 8	38.1	2.29E+13	3.67E+19
LONGERON	23.1	2.67E+13	4.29E+19
ROW 9	8.1	2.87E+13	4.61E+19
LONGERON	7.0	2.88E+13	4.63E+19
ROW 10	21.9	2.69E+13	4.32E+19
LONGERON	36.9	2.32E+13	3.72E+19
ROW 11	51.9	1.79E+13	2.87E+19
LONGERON	66.9	1.14E+13	1.83E+19
ROW 12	81.9	4.18E+12	6.71E+18
LONGERON	96.9	1.64E+11	2.49E+17
SPACE END	89.2	1.36E+12	2.15E+18
EARTH END	-90.8	9.60E+11	1.50E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	2.90E+13	4.66E+19
SIDE DIR	90.0	1.15E+12	1.81E+18

AVERAGE ATOMIC OXYGEN DENSITY: 3.80E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 847.3 TO 1359.1 K
 ALTITUDE RANGE: 472.7 TO 482.0 KM

 *DATE: MAY 5, 1984 DAY OF YEAR: 126 *
 *CUMULATIVE EXPOSURE TIME: 28 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	6.44E+07	1.50E+14
LONGERON	126.9	8.89E+02	2.03E+09
ROW 2	141.9	5.17E-03	1.14E+04
LONGERON	156.9	2.27E-07	5.02E-01
ROW 3	171.9	8.44E-10	1.98E-03
LONGERON	173.0	9.85E-10	2.41E-03
ROW 4	158.1	3.21E-07	7.79E-01
LONGERON	143.1	6.79E-03	1.54E+04
ROW 5	128.1	8.31E+02	1.73E+09
LONGERON	113.1	4.02E+07	8.61E+13
ROW 6	98.1	9.04E+10	2.17E+17
LONGERON	83.1	3.15E+12	7.77E+18
ROW 7	68.1	9.37E+12	2.31E+19
LONGERON	53.1	1.51E+13	3.71E+19
ROW 8	38.1	1.98E+13	4.86E+19
LONGERON	23.1	2.31E+13	5.68E+19
ROW 9	8.1	2.49E+13	6.12E+19
LONGERON	7.0	2.49E+13	6.13E+19
ROW 10	21.9	2.33E+13	5.73E+19
LONGERON	36.9	2.01E+13	4.94E+19
ROW 11	51.9	1.55E+13	3.81E+19
LONGERON	66.9	9.85E+12	2.42E+19
ROW 12	81.9	3.63E+12	8.91E+18
LONGERON	96.9	1.39E+11	3.33E+17
SPACE END	89.2	1.16E+12	2.85E+18
EARTH END	-90.8	8.19E+11	2.00E+18

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	2.51E+13	6.18E+19
SIDE DIR	90.0	9.82E+11	2.40E+18

AVERAGE ATOMIC OXYGEN DENSITY: 3.29E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 810.0 TO 1350.6 K
 ALTITUDE RANGE: 472.8 TO 481.3 KM


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*DATE:      MAY 12, 1984      DAY OF YEAR: 133 *
*CUMULATIVE EXPOSURE TIME: 35 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	5.34E+07	1.83E+14
LONGERON	126.9	9.05E+02	2.58E+09
ROW 2	141.9	5.72E-03	1.48E+04
LONGERON	156.9	1.93E-07	6.19E-01
ROW 3	171.9	4.19E-10	2.23E-03
LONGERON	173.1	2.82E-10	2.58E-03
ROW 4	158.1	6.98E-08	8.22E-01
LONGERON	143.1	1.66E-03	1.64E+04
ROW 5	128.1	3.05E+02	1.92E+09
LONGERON	113.1	2.38E+07	1.01E+14
ROW 6	98.1	7.22E+10	2.61E+17
LONGERON	83.1	2.68E+12	9.39E+18
ROW 7	68.1	7.99E+12	2.79E+19
LONGERON	53.1	1.29E+13	4.49E+19
ROW 8	38.1	1.69E+13	5.88E+19
LONGERON	23.1	1.97E+13	6.88E+19
ROW 9	8.1	2.12E+13	7.40E+19
LONGERON	6.9	2.13E+13	7.42E+19
ROW 10	21.9	1.99E+13	6.93E+19
LONGERON	36.9	1.72E+13	5.98E+19
ROW 11	51.9	1.32E+13	4.61E+19
LONGERON	66.9	8.42E+12	2.93E+19
ROW 12	81.9	3.10E+12	1.08E+19
LONGERON	96.9	1.15E+11	4.02E+17
SPACE END	89.2	9.85E+11	3.45E+18
EARTH END	-90.8	6.89E+11	2.42E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	2.14E+13	7.48E+19
SIDE DIR	90.0	8.29E+11	2.90E+18

AVERAGE ATOMIC OXYGEN DENSITY: 2.81E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 810.9 TO 1252.3 K
 ALTITUDE RANGE: 473.6 TO 483.2 KM

 *DATE: MAY 19, 1984 DAY OF YEAR: 140 *
 *CUMULATIVE EXPOSURE TIME: 42 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	8.87E+07	2.36E+14
LONGERON	126.9	2.27E+03	3.95E+09
ROW 2	141.9	1.77E-02	2.55E+04
LONGERON	156.9	6.22E-07	9.95E-01
ROW 3	171.8	1.23E-09	2.97E-03
LONGERON	173.1	6.77E-10	2.99E-03
ROW 4	158.1	1.28E-07	8.99E-01
LONGERON	143.1	2.35E-03	1.78E+04
ROW 5	128.1	3.73E+02	2.14E+09
LONGERON	113.1	2.96E+07	1.18E+14
ROW 6	98.1	8.62E+10	3.13E+17
LONGERON	83.1	3.02E+12	1.12E+19
ROW 7	68.1	8.97E+12	3.33E+19
LONGERON	53.1	1.44E+13	5.36E+19
ROW 8	38.1	1.89E+13	7.03E+19
LONGERON	23.1	2.21E+13	8.21E+19
ROW 9	8.2	2.38E+13	8.84E+19
LONGERON	6.9	2.39E+13	8.87E+19
ROW 10	21.9	2.23E+13	8.29E+19
LONGERON	36.9	1.93E+13	7.14E+19
ROW 11	51.9	1.49E+13	5.51E+19
LONGERON	66.9	9.46E+12	3.50E+19
ROW 12	81.9	3.49E+12	1.29E+19
LONGERON	96.9	1.38E+11	4.86E+17
SPACE END	89.2	1.12E+12	4.13E+18
EARTH END	-90.8	7.90E+11	2.89E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	2.41E+13	8.93E+19
SIDE DIR	90.0	9.48E+11	3.48E+18

AVERAGE ATOMIC OXYGEN DENSITY: 3.16E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 831.9 TO 1292.9 K
 ALTITUDE RANGE: 473.9 TO 483.7 KM

 *DATE: MAY 26, 1984 DAY OF YEAR: 147 *
 *CUMULATIVE EXPOSURE TIME: 49 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	6.88E+07	2.78E+14
LONGERON	126.9	1.34E+03	4.76E+09
ROW 2	141.9	7.35E-03	3.00E+04
LONGERON	156.9	2.05E-07	1.12E+00
ROW 3	171.8	4.05E-10	3.22E-03
LONGERON	173.1	2.65E-10	3.15E-03
ROW 4	158.1	6.17E-08	9.37E-01
LONGERON	143.1	1.31E-03	1.86E+04
ROW 5	128.1	2.35E+02	2.29E+09
LONGERON	113.1	2.22E+07	1.32E+14
ROW 6	98.1	7.42E+10	3.58E+17
LONGERON	83.1	2.69E+12	1.28E+19
ROW 7	68.1	8.01E+12	3.82E+19
LONGERON	53.1	1.29E+13	6.14E+19
ROW 8	38.1	1.69E+13	8.05E+19
LONGERON	23.1	1.98E+13	9.41E+19
ROW 9	8.2	2.13E+13	1.01E+20
LONGERON	6.9	2.13E+13	1.02E+20
ROW 10	21.9	1.99E+13	9.49E+19
LONGERON	36.9	1.72E+13	8.18E+19
ROW 11	51.9	1.33E+13	6.31E+19
LONGERON	66.9	8.44E+12	4.01E+19
ROW 12	81.9	3.11E+12	1.48E+19
LONGERON	96.9	1.19E+11	5.58E+17
SPACE END	89.2	9.96E+11	4.73E+18
EARTH END	-90.8	6.97E+11	3.32E+18

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	2.15E+13	1.02E+20
SIDE DIR	90.0	8.38E+11	3.98E+18

AVERAGE ATOMIC OXYGEN DENSITY: 2.82E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 802.6 TO 1289.9 K
 ALTITUDE RANGE: 473.5 TO 483.6 KM

 *DATE: JUNE 2, 1984 DAY OF YEAR: 154 *
 *CUMULATIVE EXPOSURE TIME: 56 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.60E+07	3.00E+14
LONGERON	126.9	3.93E+02	5.00E+09
ROW 2	141.9	1.30E-03	3.08E+04
LONGERON	156.9	2.78E-08	1.14E+00
ROW 3	171.9	5.80E-11	3.25E-03
LONGERON	173.1	5.25E-11	3.18E-03
ROW 4	158.1	1.96E-08	9.48E-01
LONGERON	143.1	6.51E-04	1.90E+04
ROW 5	128.1	1.52E+02	2.38E+09
LONGERON	113.1	1.53E+07	1.41E+14
ROW 6	98.1	5.65E+10	3.92E+17
LONGERON	83.1	2.19E+12	1.42E+19
ROW 7	68.1	6.51E+12	4.21E+19
LONGERON	53.1	1.05E+13	6.78E+19
ROW 8	38.1	1.37E+13	8.88E+19
LONGERON	23.1	1.61E+13	1.04E+20
ROW 9	8.1	1.73E+13	1.12E+20
LONGERON	6.9	1.73E+13	1.12E+20
ROW 10	21.9	1.62E+13	1.05E+20
LONGERON	36.9	1.40E+13	9.03E+19
ROW 11	51.9	1.08E+13	6.96E+19
LONGERON	66.9	6.85E+12	4.43E+19
ROW 12	81.9	2.51E+12	1.63E+19
LONGERON	96.9	8.93E+10	6.12E+17
SPACE END	89.2	7.96E+11	5.21E+18
EARTH END	-90.8	5.53E+11	3.65E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.75E+13	1.13E+20
SIDE DIR	90.0	6.67E+11	4.39E+18

AVERAGE ATOMIC OXYGEN DENSITY: 2.29E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 779.3 TO 1245.4 K
 ALTITUDE RANGE: 473.5 TO 482.9 KM

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*DATE:      JUNE   9, 1984      DAY OF YEAR: 161 *
*CUMULATIVE EXPOSURE TIME:  63 DAYS                *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.39E+07	3.08E+14
LONGERON	126.9	7.02E+01	5.04E+09
ROW 2	141.9	1.29E-04	3.09E+04
LONGERON	156.9	1.98E-09	1.14E+00
ROW 3	171.9	3.88E-12	3.26E-03
LONGERON	173.0	4.47E-12	3.19E-03
ROW 4	158.1	2.73E-09	9.50E-01
LONGERON	143.1	1.68E-04	1.91E+04
ROW 5	128.1	6.83E+01	2.42E+09
LONGERON	113.1	9.22E+06	1.47E+14
ROW 6	98.1	3.89E+10	4.15E+17
LONGERON	83.1	1.62E+12	1.51E+19
ROW 7	68.1	4.82E+12	4.50E+19
LONGERON	53.1	7.76E+12	7.25E+19
ROW 8	38.1	1.02E+13	9.50E+19
LONGERON	23.1	1.19E+13	1.11E+20
ROW 9	8.1	1.28E+13	1.19E+20
LONGERON	7.0	1.28E+13	1.20E+20
ROW 10	21.9	1.20E+13	1.12E+20
LONGERON	36.9	1.03E+13	9.65E+19
ROW 11	51.9	7.95E+12	7.45E+19
LONGERON	66.9	5.05E+12	4.73E+19
ROW 12	81.9	1.85E+12	1.74E+19
LONGERON	96.9	5.85E+10	6.47E+17
SPACE END	89.2	5.75E+11	5.56E+18
EARTH END	-90.8	3.97E+11	3.89E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.29E+13	1.21E+20
SIDE DIR	90.0	4.81E+11	4.68E+18

AVERAGE ATOMIC OXYGEN DENSITY: 1.69E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 741.3 TO 1217.5 K
 ALTITUDE RANGE: 473.9 TO 481.7 KM

 *DATE: JUNE 16, 1984 DAY OF YEAR: 168 *
 *CUMULATIVE EXPOSURE TIME: 70 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.13E+07	3.15E+14
LONGERON	126.9	4.50E+01	5.07E+09
ROW 2	141.9	6.13E-05	3.09E+04
LONGERON	156.9	7.45E-10	1.14E+00
ROW 3	171.9	1.33E-12	3.26E-03
LONGERON	173.0	1.62E-12	3.19E-03
ROW 4	158.1	1.19E-09	9.51E-01
LONGERON	143.1	9.68E-05	1.92E+04
ROW 5	128.1	5.17E+01	2.45E+09
LONGERON	113.1	8.01E+06	1.52E+14
ROW 6	98.1	3.44E+10	4.36E+17
LONGERON	83.1	1.46E+12	1.60E+19
ROW 7	68.1	4.34E+12	4.76E+19
LONGERON	53.1	6.98E+12	7.67E+19
ROW 8	38.1	9.15E+12	1.00E+20
LONGERON	23.1	1.07E+13	1.17E+20
ROW 9	8.1	1.15E+13	1.26E+20
LONGERON	7.0	1.15E+13	1.27E+20
ROW 10	21.9	1.08E+13	1.18E+20
LONGERON	36.9	9.29E+12	1.02E+20
ROW 11	51.9	7.17E+12	7.88E+19
LONGERON	66.9	4.55E+12	5.01E+19
ROW 12	81.9	1.66E+12	1.84E+19
LONGERON	96.9	5.23E+10	6.79E+17
SPACE END	89.2	5.16E+11	5.87E+18
EARTH END	-90.8	3.56E+11	4.11E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.16E+13	1.28E+20
SIDE DIR	90.0	4.31E+11	4.94E+18

AVERAGE ATOMIC OXYGEN DENSITY: 1.52E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 740.1 TO 1171.6 K
 ALTITUDE RANGE: 473.3 TO 482.6 KM

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*DATE:      JUNE 23, 1984      DAY OF YEAR: 175 *
*CUMULATIVE EXPOSURE TIME:  77 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.10E+07	3.22E+14
LONGERON	126.9	4.80E+01	5.10E+09
ROW 2	141.9	6.43E-05	3.09E+04
LONGERON	156.9	6.60E-10	1.14E+00
ROW 3	171.9	9.19E-13	3.26E-03
LONGERON	173.1	8.88E-13	3.19E-03
ROW 4	158.1	5.75E-10	9.51E-01
LONGERON	143.1	4.79E-05	1.92E+04
ROW 5	128.1	3.02E+01	2.47E+09
LONGERON	113.1	5.89E+06	1.55E+14
ROW 6	98.1	3.01E+10	4.54E+17
LONGERON	83.1	1.33E+12	1.68E+19
ROW 7	68.1	3.99E+12	5.01E+19
LONGERON	53.1	6.43E+12	8.06E+19
ROW 8	38.1	8.42E+12	1.06E+20
LONGERON	23.1	9.85E+12	1.23E+20
ROW 9	8.1	1.06E+13	1.33E+20
LONGERON	6.9	1.06E+13	1.33E+20
ROW 10	21.9	9.93E+12	1.24E+20
LONGERON	36.9	8.56E+12	1.07E+20
ROW 11	51.9	6.61E+12	8.28E+19
LONGERON	66.9	4.20E+12	5.26E+19
ROW 12	81.9	1.54E+12	1.94E+19
LONGERON	96.9	4.85E+10	7.08E+17
SPACE END	89.2	4.73E+11	6.16E+18
EARTH END	-90.8	3.26E+11	4.30E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.07E+13	1.34E+20
SIDE DIR	90.0	3.95E+11	5.18E+18

AVERAGE ATOMIC OXYGEN DENSITY: 1.40E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 727.6 TO 1163.1 K
 ALTITUDE RANGE: 473.3 TO 482.9 KM

 *DATE: JUNE 30, 1984 DAY OF YEAR: 182 *
 *CUMULATIVE EXPOSURE TIME: 84 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.05E+07	3.28E+14
LONGERON	126.9	5.55E+01	5.13E+09
ROW 2	141.9	7.38E-05	3.10E+04
LONGERON	156.9	5.52E-10	1.14E+00
ROW 3	171.8	4.46E-13	3.26E-03
LONGERON	173.1	2.51E-13	3.19E-03
ROW 4	158.1	1.22E-10	9.51E-01
LONGERON	143.1	1.10E-05	1.92E+04
ROW 5	128.1	1.01E+01	2.48E+09
LONGERON	113.1	3.39E+06	1.57E+14
ROW 6	98.1	2.53E+10	4.70E+17
LONGERON	83.1	1.19E+12	1.76E+19
ROW 7	68.1	3.58E+12	5.22E+19
LONGERON	53.1	5.77E+12	8.41E+19
ROW 8	38.1	7.57E+12	1.10E+20
LONGERON	23.1	8.85E+12	1.29E+20
ROW 9	8.2	9.53E+12	1.39E+20
LONGERON	6.9	9.55E+12	1.39E+20
ROW 10	21.9	8.93E+12	1.30E+20
LONGERON	36.9	7.70E+12	1.12E+20
ROW 11	51.9	5.94E+12	8.64E+19
LONGERON	66.9	3.78E+12	5.49E+19
ROW 12	81.9	1.39E+12	2.02E+19
LONGERON	96.9	4.29E+10	7.34E+17
SPACE END	89.2	4.23E+11	6.41E+18
EARTH END	-90.8	2.90E+11	4.48E+18

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	9.63E+12	1.40E+20
SIDE DIR	90.0	3.52E+11	5.39E+18

AVERAGE ATOMIC OXYGEN DENSITY: 1.26E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 716.6 TO 1103.8 K
 ALTITUDE RANGE: 473.2 TO 482.8 KM

 *DATE: JULY 7, 1984 DAY OF YEAR: 189 *
 *CUMULATIVE EXPOSURE TIME: 91 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.04E+07	3.34E+14
LONGERON	126.9	5.36E+01	5.16E+09
ROW 2	141.9	5.90E-05	3.10E+04
LONGERON	156.9	3.60E-10	1.14E+00
ROW 3	171.8	2.51E-13	3.26E-03
LONGERON	173.1	1.30E-13	3.19E-03
ROW 4	158.1	6.05E-11	9.51E-01
LONGERON	143.1	5.37E-06	1.92E+04
ROW 5	128.1	5.58E+00	2.48E+09
LONGERON	113.1	2.60E+06	1.59E+14
ROW 6	98.1	2.38E+10	4.84E+17
LONGERON	83.1	1.14E+12	1.82E+19
ROW 7	68.1	3.44E+12	5.43E+19
LONGERON	53.1	5.53E+12	8.74E+19
ROW 8	38.1	7.25E+12	1.15E+20
LONGERON	23.1	8.48E+12	1.34E+20
ROW 9	8.2	9.13E+12	1.44E+20
LONGERON	6.9	9.16E+12	1.45E+20
ROW 10	21.9	8.56E+12	1.35E+20
LONGERON	36.9	7.38E+12	1.16E+20
ROW 11	51.9	5.69E+12	8.98E+19
LONGERON	66.9	3.62E+12	5.71E+19
ROW 12	81.9	1.33E+12	2.10E+19
LONGERON	96.9	4.08E+10	7.59E+17
SPACE END	89.2	4.04E+11	6.66E+18
EARTH END	-90.8	2.76E+11	4.65E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	9.22E+12	1.46E+20
SIDE DIR	90.0	3.36E+11	5.59E+18

AVERAGE ATOMIC OXYGEN DENSITY: 1.21E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 711.4 TO 1095.7 K
 ALTITUDE RANGE: 473.2 TO 482.0 KM

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*DATE:      JULY 14, 1984      DAY OF YEAR: 196 *
*CUMULATIVE EXPOSURE TIME: 98 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	9.47E+06	3.40E+14
LONGERON	126.9	3.74E+01	5.19E+09
ROW 2	141.9	3.27E-05	3.10E+04
LONGERON	156.9	1.97E-10	1.14E+00
ROW 3	171.9	1.74E-13	3.26E-03
LONGERON	173.1	1.29E-13	3.19E-03
ROW 4	158.1	8.09E-11	9.51E-01
LONGERON	143.1	8.03E-06	1.92E+04
ROW 5	128.1	7.63E+00	2.48E+09
LONGERON	113.1	2.94E+06	1.60E+14
ROW 6	98.1	2.44E+10	4.99E+17
LONGERON	83.1	1.16E+12	1.89E+19
ROW 7	68.1	3.47E+12	5.64E+19
LONGERON	53.1	5.59E+12	9.08E+19
ROW 8	38.1	7.32E+12	1.19E+20
LONGERON	23.1	8.56E+12	1.39E+20
ROW 9	8.1	9.21E+12	1.50E+20
LONGERON	6.9	9.24E+12	1.50E+20
ROW 10	21.9	8.64E+12	1.40E+20
LONGERON	36.9	7.44E+12	1.21E+20
ROW 11	51.9	5.74E+12	9.33E+19
LONGERON	66.9	3.65E+12	5.93E+19
ROW 12	81.9	1.34E+12	2.18E+19
LONGERON	96.9	4.10E+10	7.84E+17
SPACE END	89.2	4.08E+11	6.91E+18
EARTH END	-90.8	2.79E+11	4.81E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	9.31E+12	1.51E+20
SIDE DIR	90.0	3.40E+11	5.80E+18

AVERAGE ATOMIC OXYGEN DENSITY: 1.22E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 706.8 TO 1147.8 K
 ALTITUDE RANGE: 473.2 TO 481.7 KM

 *DATE: JULY 21, 1984 DAY OF YEAR: 203 *
 *CUMULATIVE EXPOSURE TIME: 105 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.44E+06	3.43E+14
LONGERON	126.9	9.76E+00	5.19E+09
ROW 2	141.9	6.00E-06	3.10E+04
LONGERON	156.9	3.15E-11	1.14E+00
ROW 3	171.9	2.82E-14	3.26E-03
LONGERON	173.0	2.53E-14	3.19E-03
ROW 4	158.1	2.27E-11	9.51E-01
LONGERON	143.1	3.51E-06	1.92E+04
ROW 5	128.1	4.79E+00	2.49E+09
LONGERON	113.1	2.10E+06	1.62E+14
ROW 6	98.1	1.87E+10	5.10E+17
LONGERON	83.1	9.38E+11	1.95E+19
ROW 7	68.1	2.81E+12	5.81E+19
LONGERON	53.1	4.52E+12	9.35E+19
ROW 8	38.1	5.93E+12	1.23E+20
LONGERON	23.1	6.93E+12	1.43E+20
ROW 9	8.1	7.46E+12	1.54E+20
LONGERON	7.0	7.48E+12	1.55E+20
ROW 10	21.9	6.99E+12	1.45E+20
LONGERON	36.9	6.02E+12	1.25E+20
ROW 11	51.9	4.64E+12	9.61E+19
LONGERON	66.9	2.95E+12	6.11E+19
ROW 12	81.9	1.08E+12	2.25E+19
LONGERON	96.9	3.00E+10	8.02E+17
SPACE END	89.2	3.25E+11	7.10E+18
EARTH END	-90.8	2.21E+11	4.95E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.53E+12	1.56E+20
SIDE DIR	90.0	2.70E+11	5.96E+18

AVERAGE ATOMIC OXYGEN DENSITY: 9.86E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 680.0 TO 1136.0 K
 ALTITUDE RANGE: 473.0 TO 482.5 KM

 *DATE: JULY 28, 1984 DAY OF YEAR: 210 *
 *CUMULATIVE EXPOSURE TIME: 112 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.78E+06	3.44E+14
LONGERON	126.9	1.47E+00	5.19E+09
ROW 2	141.9	3.48E-07	3.10E+04
LONGERON	156.9	9.74E-13	1.14E+00
ROW 3	171.9	8.14E-16	3.26E-03
LONGERON	173.0	1.13E-15	3.19E-03
ROW 4	158.1	2.15E-12	9.51E-01
LONGERON	143.1	7.71E-07	1.92E+04
ROW 5	128.1	2.09E+00	2.49E+09
LONGERON	113.1	1.31E+06	1.63E+14
ROW 6	98.1	1.36E+10	5.18E+17
LONGERON	83.1	7.34E+11	2.00E+19
ROW 7	68.1	2.20E+12	5.94E+19
LONGERON	53.1	3.54E+12	9.57E+19
ROW 8	38.1	4.64E+12	1.25E+20
LONGERON	23.1	5.42E+12	1.47E+20
ROW 9	8.1	5.83E+12	1.58E+20
LONGERON	7.0	5.85E+12	1.58E+20
ROW 10	21.9	5.46E+12	1.48E+20
LONGERON	36.9	4.71E+12	1.27E+20
ROW 11	51.9	3.63E+12	9.83E+19
LONGERON	66.9	2.31E+12	6.25E+19
ROW 12	81.9	8.38E+11	2.30E+19
LONGERON	96.9	2.10E+10	8.15E+17
SPACE END	89.2	2.49E+11	7.25E+18
EARTH END	-90.8	1.68E+11	5.05E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.89E+12	1.59E+20
SIDE DIR	90.0	2.06E+11	6.09E+18

AVERAGE ATOMIC OXYGEN DENSITY: 7.71E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 675.2 TO 1030.1 K
 ALTITUDE RANGE: 472.9 TO 482.6 KM

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*DATE:      AUGUST  4, 1984      DAY OF YEAR:  217 *
*CUMULATIVE EXPOSURE TIME:  119  DAYS      *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.41E+06	3.45E+14
LONGERON	126.9	2.49E+00	5.19E+09
ROW 2	141.9	6.98E-07	3.10E+04
LONGERON	156.9	2.12E-12	1.14E+00
ROW 3	171.9	1.67E-15	3.26E-03
LONGERON	173.0	1.95E-15	3.19E-03
ROW 4	158.1	3.02E-12	9.51E-01
LONGERON	143.1	9.44E-07	1.92E+04
ROW 5	128.1	2.46E+00	2.49E+09
LONGERON	113.1	1.53E+06	1.63E+14
ROW 6	98.1	1.52E+10	5.28E+17
LONGERON	83.1	8.05E+11	2.04E+19
ROW 7	68.1	2.42E+12	6.09E+19
LONGERON	53.1	3.89E+12	9.80E+19
ROW 8	38.1	5.10E+12	1.28E+20
LONGERON	23.1	5.96E+12	1.50E+20
ROW 9	8.1	6.42E+12	1.62E+20
LONGERON	7.0	6.43E+12	1.62E+20
ROW 10	21.9	6.01E+12	1.51E+20
LONGERON	36.9	5.18E+12	1.31E+20
ROW 11	51.9	4.00E+12	1.01E+20
LONGERON	66.9	2.54E+12	6.40E+19
ROW 12	81.9	9.27E+11	2.35E+19
LONGERON	96.9	2.43E+10	8.29E+17
SPACE END	89.2	2.76E+11	7.42E+18
EARTH END	-90.8	1.87E+11	5.16E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.48E+12	1.63E+20
SIDE DIR	90.0	2.28E+11	6.23E+18

AVERAGE ATOMIC OXYGEN DENSITY: 8.49E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 676.2 TO 1032.4 K
 ALTITUDE RANGE: 472.9 TO 482.3 KM

 *DATE: AUGUST 11, 1984 DAY OF YEAR: 224 *
 *CUMULATIVE EXPOSURE TIME: 126 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.03E+06	3.47E+14
LONGERON	126.9	4.43E+00	5.20E+09
ROW 2	141.9	1.57E-06	3.10E+04
LONGERON	156.9	4.51E-12	1.14E+00
ROW 3	171.9	2.61E-15	3.26E-03
LONGERON	173.1	2.04E-15	3.19E-03
ROW 4	158.1	2.30E-12	9.51E-01
LONGERON	143.1	6.26E-07	1.92E+04
ROW 5	128.1	1.72E+00	2.49E+09
LONGERON	113.1	1.31E+06	1.64E+14
ROW 6	98.1	1.54E+10	5.37E+17
LONGERON	83.1	8.41E+11	2.10E+19
ROW 7	68.1	2.54E+12	6.24E+19
LONGERON	53.1	4.08E+12	1.00E+20
ROW 8	38.1	5.35E+12	1.32E+20
LONGERON	23.1	6.26E+12	1.54E+20
ROW 9	8.1	6.74E+12	1.66E+20
LONGERON	6.9	6.76E+12	1.66E+20
ROW 10	21.9	6.32E+12	1.55E+20
LONGERON	36.9	5.44E+12	1.34E+20
ROW 11	51.9	4.20E+12	1.03E+20
LONGERON	66.9	2.67E+12	6.57E+19
ROW 12	81.9	9.77E+11	2.41E+19
LONGERON	96.9	2.61E+10	8.45E+17
SPACE END	89.2	2.90E+11	7.59E+18
EARTH END	-90.8	1.96E+11	5.28E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.81E+12	1.67E+20
SIDE DIR	90.0	2.40E+11	6.37E+18

AVERAGE ATOMIC OXYGEN DENSITY: 8.92E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 680.5 TO 1026.1 K
 ALTITUDE RANGE: 473.2 TO 481.3 KM

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*DATE:      AUGUST 18, 1984      DAY OF YEAR: 231 *
*CUMULATIVE EXPOSURE TIME: 133 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.01E+06	3.49E+14
LONGERON	126.9	5.05E+00	5.20E+09
ROW 2	141.9	1.60E-06	3.10E+04
LONGERON	156.9	3.17E-12	1.14E+00
ROW 3	171.8	1.08E-15	3.26E-03
LONGERON	173.1	5.20E-16	3.19E-03
ROW 4	158.1	4.51E-13	9.51E-01
LONGERON	143.1	1.31E-07	1.92E+04
ROW 5	128.1	5.35E-01	2.49E+09
LONGERON	113.1	7.53E+05	1.65E+14
ROW 6	98.1	1.36E+10	5.45E+17
LONGERON	83.1	7.94E+11	2.14E+19
ROW 7	68.1	2.40E+12	6.39E+19
LONGERON	53.1	3.86E+12	1.03E+20
ROW 8	38.1	5.06E+12	1.35E+20
LONGERON	23.1	5.92E+12	1.58E+20
ROW 9	8.2	6.37E+12	1.70E+20
LONGERON	6.9	6.39E+12	1.70E+20
ROW 10	21.9	5.97E+12	1.59E+20
LONGERON	36.9	5.15E+12	1.37E+20
ROW 11	51.9	3.97E+12	1.06E+20
LONGERON	66.9	2.53E+12	6.72E+19
ROW 12	81.9	9.23E+11	2.47E+19
LONGERON	96.9	2.40E+10	8.60E+17
SPACE END	89.2	2.72E+11	7.76E+18
EARTH END	-90.8	1.83E+11	5.39E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.44E+12	1.71E+20
SIDE DIR	90.0	2.25E+11	6.51E+18

AVERAGE ATOMIC OXYGEN DENSITY: 8.43E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 671.3 TO 987.3 K
 ALTITUDE RANGE: 472.7 TO 481.8 KM

 *DATE: AUGUST 25, 1984 DAY OF YEAR: 238 *
 *CUMULATIVE EXPOSURE TIME: 140 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.74E+06	3.51E+14
LONGERON	126.9	6.12E+00	5.20E+09
ROW 2	141.9	1.68E-06	3.10E+04
LONGERON	156.9	3.03E-12	1.14E+00
ROW 3	171.8	1.09E-15	3.26E-03
LONGERON	173.1	6.06E-16	3.19E-03
ROW 4	158.1	5.69E-13	9.51E-01
LONGERON	143.1	1.56E-07	1.92E+04
ROW 5	128.1	5.85E-01	2.49E+09
LONGERON	113.1	8.50E+05	1.65E+14
ROW 6	98.1	1.55E+10	5.55E+17
LONGERON	83.1	8.81E+11	2.20E+19
ROW 7	68.1	2.66E+12	6.55E+19
LONGERON	53.1	4.28E+12	1.05E+20
ROW 8	38.1	5.61E+12	1.38E+20
LONGERON	23.1	6.55E+12	1.61E+20
ROW 9	8.2	7.05E+12	1.74E+20
LONGERON	6.9	7.07E+12	1.74E+20
ROW 10	21.9	6.61E+12	1.63E+20
LONGERON	36.9	5.70E+12	1.40E+20
ROW 11	51.9	4.40E+12	1.08E+20
LONGERON	66.9	2.80E+12	6.89E+19
ROW 12	81.9	1.02E+12	2.53E+19
LONGERON	96.9	2.72E+10	8.76E+17
SPACE END	89.2	3.03E+11	7.94E+18
EARTH END	-90.8	2.04E+11	5.52E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.13E+12	1.76E+20
SIDE DIR	90.0	2.50E+11	6.66E+18

AVERAGE ATOMIC OXYGEN DENSITY: 9.33E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 668.9 TO 1012.4 K
 ALTITUDE RANGE: 472.6 TO 482.4 KM

 *DATE: SEPTEMBER 1, 1984 DAY OF YEAR: 245 *
 *CUMULATIVE EXPOSURE TIME: 147 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.20E+06	3.54E+14
LONGERON	126.9	6.22E+00	5.21E+09
ROW 2	141.9	1.78E-06	3.10E+04
LONGERON	156.9	4.24E-12	1.14E+00
ROW 3	171.9	2.38E-15	3.26E-03
LONGERON	173.1	2.02E-15	3.19E-03
ROW 4	158.1	2.40E-12	9.51E-01
LONGERON	143.1	6.22E-07	1.92E+04
ROW 5	128.1	1.60E+00	2.49E+09
LONGERON	113.1	1.36E+06	1.66E+14
ROW 6	98.1	1.85E+10	5.66E+17
LONGERON	83.1	1.00E+12	2.26E+19
ROW 7	68.1	3.02E+12	6.73E+19
LONGERON	53.1	4.86E+12	1.08E+20
ROW 8	38.1	6.37E+12	1.42E+20
LONGERON	23.1	7.45E+12	1.66E+20
ROW 9	8.1	8.02E+12	1.79E+20
LONGERON	6.9	8.04E+12	1.79E+20
ROW 10	21.9	7.52E+12	1.67E+20
LONGERON	36.9	6.48E+12	1.44E+20
ROW 11	51.9	5.00E+12	1.11E+20
LONGERON	66.9	3.18E+12	7.08E+19
ROW 12	81.9	1.16E+12	2.60E+19
LONGERON	96.9	3.15E+10	8.95E+17
SPACE END	89.2	3.46E+11	8.15E+18
EARTH END	-90.8	2.34E+11	5.66E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	8.10E+12	1.80E+20
SIDE DIR	90.0	2.87E+11	6.83E+18

AVERAGE ATOMIC OXYGEN DENSITY: 1.06E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 685.6 TO 1037.4 K
 ALTITUDE RANGE: 472.5 TO 482.4 KM

 *DATE: SEPTEMBER 8, 1984 DAY OF YEAR: 252 *
 *CUMULATIVE EXPOSURE TIME: 154 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.04E+06	3.56E+14
LONGERON	126.9	3.19E+00	5.21E+09
ROW 2	141.9	8.04E-07	3.10E+04
LONGERON	156.9	1.98E-12	1.14E+00
ROW 3	171.9	1.29E-15	3.26E-03
LONGERON	173.0	1.40E-15	3.19E-03
ROW 4	158.1	2.26E-12	9.51E-01
LONGERON	143.1	7.56E-07	1.92E+04
ROW 5	128.1	2.13E+00	2.49E+09
LONGERON	113.1	1.56E+06	1.67E+14
ROW 6	98.1	1.81E+10	5.77E+17
LONGERON	83.1	9.79E+11	2.32E+19
ROW 7	68.1	2.94E+12	6.91E+19
LONGERON	53.1	4.73E+12	1.11E+20
ROW 8	38.1	6.20E+12	1.46E+20
LONGERON	23.1	7.25E+12	1.70E+20
ROW 9	8.1	7.80E+12	1.83E+20
LONGERON	7.0	7.82E+12	1.84E+20
ROW 10	21.9	7.31E+12	1.72E+20
LONGERON	36.9	6.30E+12	1.48E+20
ROW 11	51.9	4.86E+12	1.14E+20
LONGERON	66.9	3.09E+12	7.27E+19
ROW 12	81.9	1.13E+12	2.67E+19
LONGERON	96.9	2.95E+10	9.13E+17
SPACE END	89.2	3.36E+11	8.35E+18
EARTH END	-90.8	2.27E+11	5.79E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.88E+12	1.85E+20
SIDE DIR	90.0	2.78E+11	7.00E+18

AVERAGE ATOMIC OXYGEN DENSITY: 1.03E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 686.3 TO 1038.2 K
 ALTITUDE RANGE: 472.5 TO 481.7 KM

 *DATE: SEPTEMBER 15, 1984 DAY OF YEAR: 259 *
 *CUMULATIVE EXPOSURE TIME: 161 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.34E+06	3.56E+14
LONGERON	126.9	6.35E-01	5.21E+09
ROW 2	141.9	8.19E-08	3.10E+04
LONGERON	156.9	1.33E-13	1.14E+00
ROW 3	171.9	8.05E-17	3.26E-03
LONGERON	173.0	1.13E-16	3.19E-03
ROW 4	158.1	2.97E-13	9.51E-01
LONGERON	143.1	1.79E-07	1.92E+04
ROW 5	128.1	8.78E-01	2.49E+09
LONGERON	113.1	9.30E+05	1.68E+14
ROW 6	98.1	1.32E+10	5.85E+17
LONGERON	83.1	7.76E+11	2.36E+19
ROW 7	68.1	2.34E+12	7.05E+19
LONGERON	53.1	3.76E+12	1.13E+20
ROW 8	38.1	4.93E+12	1.49E+20
LONGERON	23.1	5.76E+12	1.74E+20
ROW 9	8.1	6.20E+12	1.87E+20
LONGERON	7.0	6.21E+12	1.88E+20
ROW 10	21.9	5.81E+12	1.75E+20
LONGERON	36.9	5.00E+12	1.51E+20
ROW 11	51.9	3.86E+12	1.17E+20
LONGERON	66.9	2.45E+12	7.42E+19
ROW 12	81.9	8.93E+11	2.72E+19
LONGERON	96.9	2.12E+10	9.26E+17
SPACE END	89.2	2.61E+11	8.51E+18
EARTH END	-90.8	1.75E+11	5.90E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.26E+12	1.89E+20
SIDE DIR	90.0	2.15E+11	7.13E+18

AVERAGE ATOMIC OXYGEN DENSITY: 8.20E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 658.8 TO 1005.8 K
 ALTITUDE RANGE: 472.9 TO 480.8 KM

 *DATE: SEPTEMBER 22, 1984 DAY OF YEAR: 266 *
 *CUMULATIVE EXPOSURE TIME: 168 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.66E+06	3.58E+14
LONGERON	126.9	2.67E+00	5.21E+09
ROW 2	141.9	7.74E-07	3.10E+04
LONGERON	156.9	2.18E-12	1.14E+00
ROW 3	171.9	1.34E-15	3.26E-03
LONGERON	173.0	1.17E-15	3.19E-03
ROW 4	158.1	1.57E-12	9.51E-01
LONGERON	143.1	5.33E-07	1.92E+04
ROW 5	128.1	1.80E+00	2.50E+09
LONGERON	113.1	1.51E+06	1.68E+14
ROW 6	98.1	1.78E+10	5.95E+17
LONGERON	83.1	9.70E+11	2.42E+19
ROW 7	68.1	2.92E+12	7.23E+19
LONGERON	53.1	4.70E+12	1.16E+20
ROW 8	38.1	6.16E+12	1.52E+20
LONGERON	23.1	7.20E+12	1.78E+20
ROW 9	8.1	7.74E+12	1.92E+20
LONGERON	7.0	7.77E+12	1.92E+20
ROW 10	21.9	7.26E+12	1.80E+20
LONGERON	36.9	6.25E+12	1.55E+20
ROW 11	51.9	4.83E+12	1.20E+20
LONGERON	66.9	3.07E+12	7.60E+19
ROW 12	81.9	1.12E+12	2.79E+19
LONGERON	96.9	2.88E+10	9.43E+17
SPACE END	89.2	3.31E+11	8.71E+18
EARTH END	-90.8	2.24E+11	6.03E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.82E+12	1.94E+20
SIDE DIR	90.0	2.74E+11	7.30E+18

AVERAGE ATOMIC OXYGEN DENSITY: 1.03E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 667.0 TO 1054.9 K
 ALTITUDE RANGE: 472.3 TO 481.7 KM

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*DATE:  SEPTEMBER 29, 1984          DAY OF YEAR: 273 *
*CUMULATIVE EXPOSURE TIME: 175 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.25E+06	3.60E+14
LONGERON	126.9	3.66E+00	5.21E+09
ROW 2	141.9	9.40E-07	3.10E+04
LONGERON	156.9	2.16E-12	1.14E+00
ROW 3	171.8	1.13E-15	3.26E-03
LONGERON	173.1	8.86E-16	3.19E-03
ROW 4	158.1	1.11E-12	9.51E-01
LONGERON	143.1	3.65E-07	1.92E+04
ROW 5	128.1	1.31E+00	2.50E+09
LONGERON	113.1	1.32E+06	1.69E+14
ROW 6	98.1	1.85E+10	6.07E+17
LONGERON	83.1	1.03E+12	2.48E+19
ROW 7	68.1	3.11E+12	7.41E+19
LONGERON	53.1	5.00E+12	1.19E+20
ROW 8	38.1	6.56E+12	1.56E+20
LONGERON	23.1	7.67E+12	1.83E+20
ROW 9	8.2	8.25E+12	1.97E+20
LONGERON	6.9	8.27E+12	1.97E+20
ROW 10	21.9	7.73E+12	1.84E+20
LONGERON	36.9	6.67E+12	1.59E+20
ROW 11	51.9	5.14E+12	1.23E+20
LONGERON	66.9	3.27E+12	7.80E+19
ROW 12	81.9	1.19E+12	2.86E+19
LONGERON	96.9	3.11E+10	9.62E+17
SPACE END	89.2	3.54E+11	8.93E+18
EARTH END	-90.8	2.39E+11	6.18E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	8.34E+12	1.99E+20
SIDE DIR	90.0	2.92E+11	7.47E+18

AVERAGE ATOMIC OXYGEN DENSITY: 1.09E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 681.8 TO 1048.1 K
 ALTITUDE RANGE: 472.3 TO 482.0 KM

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*DATE:    OCTOBER   6, 1984          DAY OF YEAR:  280 *
*CUMULATIVE EXPOSURE TIME:  182 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.78E+06	3.62E+14
LONGERON	126.9	5.58E+00	5.22E+09
ROW 2	141.9	1.39E-06	3.10E+04
LONGERON	156.9	2.11E-12	1.14E+00
ROW 3	171.8	6.08E-16	3.26E-03
LONGERON	173.1	2.97E-16	3.19E-03
ROW 4	158.1	3.15E-13	9.51E-01
LONGERON	143.1	1.18E-07	1.92E+04
ROW 5	128.1	5.76E-01	2.50E+09
LONGERON	113.1	9.18E+05	1.70E+14
ROW 6	98.1	1.75E+10	6.17E+17
LONGERON	83.1	1.02E+12	2.55E+19
ROW 7	68.1	3.07E+12	7.60E+19
LONGERON	53.1	4.95E+12	1.22E+20
ROW 8	38.1	6.49E+12	1.60E+20
LONGERON	23.1	7.59E+12	1.87E+20
ROW 9	8.2	8.17E+12	2.02E+20
LONGERON	6.9	8.19E+12	2.02E+20
ROW 10	21.9	7.65E+12	1.89E+20
LONGERON	36.9	6.60E+12	1.63E+20
ROW 11	51.9	5.09E+12	1.26E+20
LONGERON	66.9	3.24E+12	7.99E+19
ROW 12	81.9	1.18E+12	2.93E+19
LONGERON	96.9	3.07E+10	9.81E+17
SPACE END	89.2	3.49E+11	9.14E+18
EARTH END	-90.8	2.34E+11	6.32E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	8.25E+12	2.04E+20
SIDE DIR	90.0	2.88E+11	7.65E+18

AVERAGE ATOMIC OXYGEN DENSITY: 1.08E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 677.5 TO 1000.5 K
 ALTITUDE RANGE: 472.2 TO 481.9 KM

 *DATE: OCTOBER 13, 1984 DAY OF YEAR: 287 *
 *CUMULATIVE EXPOSURE TIME: 189 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.68E+06	3.65E+14
LONGERON	126.9	7.66E+00	5.22E+09
ROW 2	141.9	2.19E-06	3.10E+04
LONGERON	156.9	4.19E-12	1.14E+00
ROW 3	171.9	1.65E-15	3.26E-03
LONGERON	173.1	1.03E-15	3.19E-03
ROW 4	158.1	1.06E-12	9.51E-01
LONGERON	143.1	2.87E-07	1.92E+04
ROW 5	128.1	9.36E-01	2.50E+09
LONGERON	113.1	1.14E+06	1.71E+14
ROW 6	98.1	1.96E+10	6.29E+17
LONGERON	83.1	1.11E+12	2.61E+19
ROW 7	68.1	3.34E+12	7.80E+19
LONGERON	53.1	5.38E+12	1.26E+20
ROW 8	38.1	7.05E+12	1.65E+20
LONGERON	23.1	8.25E+12	1.92E+20
ROW 9	8.1	8.88E+12	2.07E+20
LONGERON	6.9	8.90E+12	2.08E+20
ROW 10	21.9	8.32E+12	1.94E+20
LONGERON	36.9	7.17E+12	1.67E+20
ROW 11	51.9	5.53E+12	1.29E+20
LONGERON	66.9	3.52E+12	8.21E+19
ROW 12	81.9	1.28E+12	3.01E+19
LONGERON	96.9	3.42E+10	1.00E+18
SPACE END	89.2	3.81E+11	9.37E+18
EARTH END	-90.8	2.57E+11	6.48E+18

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	8.97E+12	2.09E+20
SIDE DIR	90.0	3.15E+11	7.84E+18

AVERAGE ATOMIC OXYGEN DENSITY: 1.18E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 688.1 TO 1026.9 K
 ALTITUDE RANGE: 472.3 TO 481.0 KM

 *DATE: OCTOBER 20, 1984 DAY OF YEAR: 294 *
 *CUMULATIVE EXPOSURE TIME: 196 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	5.72E+06	3.69E+14
LONGERON	126.9	1.24E+01	5.23E+09
ROW 2	141.9	7.75E-06	3.10E+04
LONGERON	156.9	4.48E-11	1.14E+00
ROW 3	171.9	4.09E-14	3.26E-03
LONGERON	173.0	3.07E-14	3.19E-03
ROW 4	158.1	2.00E-11	9.51E-01
LONGERON	143.1	2.43E-06	1.92E+04
ROW 5	128.1	3.45E+00	2.50E+09
LONGERON	113.1	2.04E+06	1.72E+14
ROW 6	98.1	2.32E+10	6.43E+17
LONGERON	83.1	1.22E+12	2.69E+19
ROW 7	68.1	3.67E+12	8.02E+19
LONGERON	53.1	5.91E+12	1.29E+20
ROW 8	38.1	7.75E+12	1.69E+20
LONGERON	23.1	9.05E+12	1.98E+20
ROW 9	8.1	9.74E+12	2.13E+20
LONGERON	7.0	9.77E+12	2.14E+20
ROW 10	21.9	9.13E+12	2.00E+20
LONGERON	36.9	7.87E+12	1.72E+20
ROW 11	51.9	6.07E+12	1.33E+20
LONGERON	66.9	3.86E+12	8.44E+19
ROW 12	81.9	1.41E+12	3.10E+19
LONGERON	96.9	3.89E+10	1.02E+18
SPACE END	89.2	4.23E+11	9.62E+18
EARTH END	-90.8	2.86E+11	6.65E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	9.85E+12	2.15E+20
SIDE DIR	90.0	3.50E+11	8.05E+18

AVERAGE ATOMIC OXYGEN DENSITY: 1.29E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 694.8 TO 1092.9 K
 ALTITUDE RANGE: 472.2 TO 480.7 KM

 *DATE: OCTOBER 27, 1984 DAY OF YEAR: 301 *
 *CUMULATIVE EXPOSURE TIME: 203 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.51E+06	3.71E+14
LONGERON	126.9	6.36E+00	5.23E+09
ROW 2	141.9	3.93E-06	3.10E+04
LONGERON	156.9	2.14E-11	1.14E+00
ROW 3	171.9	1.79E-14	3.26E-03
LONGERON	173.0	1.27E-14	3.19E-03
ROW 4	158.1	8.59E-12	9.51E-01
LONGERON	143.1	1.27E-06	1.92E+04
ROW 5	128.1	2.45E+00	2.50E+09
LONGERON	113.1	1.66E+06	1.73E+14
ROW 6	98.1	1.88E+10	6.54E+17
LONGERON	83.1	1.03E+12	2.75E+19
ROW 7	68.1	3.09E+12	8.21E+19
LONGERON	53.1	4.97E+12	1.32E+20
ROW 8	38.1	6.52E+12	1.73E+20
LONGERON	23.1	7.62E+12	2.02E+20
ROW 9	8.1	8.20E+12	2.18E+20
LONGERON	7.0	8.22E+12	2.19E+20
ROW 10	21.9	7.68E+12	2.04E+20
LONGERON	36.9	6.62E+12	1.76E+20
ROW 11	51.9	5.11E+12	1.36E+20
LONGERON	66.9	3.25E+12	8.64E+19
ROW 12	81.9	1.19E+12	3.17E+19
LONGERON	96.9	3.10E+10	1.04E+18
SPACE END	89.2	3.52E+11	9.84E+18
EARTH END	-90.8	2.37E+11	6.79E+18

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	8.28E+12	2.20E+20
SIDE DIR	90.0	2.91E+11	8.22E+18

AVERAGE ATOMIC OXYGEN DENSITY: 1.09E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 674.3 TO 1092.5 K
 ALTITUDE RANGE: 472.0 TO 481.5 KM

 *DATE: NOVEMBER 3, 1984 DAY OF YEAR: 308 *
 *CUMULATIVE EXPOSURE TIME: 210 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.67E+06	3.72E+14
LONGERON	126.9	1.30E+00	5.23E+09
ROW 2	141.9	2.99E-07	3.10E+04
LONGERON	156.9	6.33E-13	1.14E+00
ROW 3	171.9	3.26E-16	3.26E-03
LONGERON	173.0	3.15E-16	3.19E-03
ROW 4	158.1	5.88E-13	9.51E-01
LONGERON	143.1	2.77E-07	1.92E+04
ROW 5	128.1	1.14E+00	2.50E+09
LONGERON	113.1	1.06E+06	1.73E+14
ROW 6	98.1	1.43E+10	6.63E+17
LONGERON	83.1	8.38E+11	2.80E+19
ROW 7	68.1	2.53E+12	8.36E+19
LONGERON	53.1	4.07E+12	1.35E+20
ROW 8	38.1	5.33E+12	1.76E+20
LONGERON	23.1	6.23E+12	2.06E+20
ROW 9	8.1	6.71E+12	2.22E+20
LONGERON	7.0	6.73E+12	2.23E+20
ROW 10	21.9	6.29E+12	2.08E+20
LONGERON	36.9	5.42E+12	1.79E+20
ROW 11	51.9	4.18E+12	1.38E+20
LONGERON	66.9	2.66E+12	8.80E+19
ROW 12	81.9	9.68E+11	3.23E+19
LONGERON	96.9	2.34E+10	1.06E+18
SPACE END	89.2	2.83E+11	1.00E+19
EARTH END	-90.8	1.90E+11	6.91E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.78E+12	2.24E+20
SIDE DIR	90.0	2.33E+11	8.37E+18

AVERAGE ATOMIC OXYGEN DENSITY: 8.89E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 669.2 TO 1018.9 K
 ALTITUDE RANGE: 472.0 TO 481.6 KM

 *DATE: NOVEMBER 10, 1984 DAY OF YEAR: 315 *
 *CUMULATIVE EXPOSURE TIME: 217 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.84E+06	3.73E+14
LONGERON	126.9	1.53E+00	5.23E+09
ROW 2	141.9	4.04E-07	3.10E+04
LONGERON	156.9	1.12E-12	1.14E+00
ROW 3	171.9	7.61E-16	3.26E-03
LONGERON	173.1	8.04E-16	3.19E-03
ROW 4	158.1	1.26E-12	9.51E-01
LONGERON	143.1	4.43E-07	1.92E+04
ROW 5	128.1	1.40E+00	2.50E+09
LONGERON	113.1	1.15E+06	1.74E+14
ROW 6	98.1	1.50E+10	6.72E+17
LONGERON	83.1	8.66E+11	2.85E+19
ROW 7	68.1	2.61E+12	8.52E+19
LONGERON	53.1	4.20E+12	1.37E+20
ROW 8	38.1	5.50E+12	1.80E+20
LONGERON	23.1	6.43E+12	2.10E+20
ROW 9	8.1	6.92E+12	2.26E+20
LONGERON	6.9	6.94E+12	2.27E+20
ROW 10	21.9	6.48E+12	2.12E+20
LONGERON	36.9	5.59E+12	1.83E+20
ROW 11	51.9	4.31E+12	1.41E+20
LONGERON	66.9	2.74E+12	8.96E+19
ROW 12	81.9	9.98E+11	3.29E+19
LONGERON	96.9	2.43E+10	1.07E+18
SPACE END	89.2	2.93E+11	1.02E+19
EARTH END	-90.8	1.97E+11	7.03E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.99E+12	2.29E+20
SIDE DIR	90.0	2.42E+11	8.51E+18

AVERAGE ATOMIC OXYGEN DENSITY: 9.16E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 666.8 TO 1036.5 K
 ALTITUDE RANGE: 471.9 TO 481.3 KM

 *DATE: NOVEMBER 17, 1984 DAY OF YEAR: 322 *
 *CUMULATIVE EXPOSURE TIME: 224 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.68E+06	3.76E+14
LONGERON	126.9	1.03E+01	5.24E+09
ROW 2	141.9	6.81E-06	3.11E+04
LONGERON	156.9	4.15E-11	1.14E+00
ROW 3	171.8	4.23E-14	3.26E-03
LONGERON	173.1	3.84E-14	3.19E-03
ROW 4	158.1	3.10E-11	9.51E-01
LONGERON	143.1	4.03E-06	1.92E+04
ROW 5	128.1	4.67E+00	2.51E+09
LONGERON	113.1	2.00E+06	1.75E+14
ROW 6	98.1	2.03E+10	6.84E+17
LONGERON	83.1	1.07E+12	2.92E+19
ROW 7	68.1	3.23E+12	8.72E+19
LONGERON	53.1	5.20E+12	1.40E+20
ROW 8	38.1	6.82E+12	1.84E+20
LONGERON	23.1	7.97E+12	2.15E+20
ROW 9	8.2	8.58E+12	2.31E+20
LONGERON	6.9	8.60E+12	2.32E+20
ROW 10	21.9	8.04E+12	2.17E+20
LONGERON	36.9	6.93E+12	1.87E+20
ROW 11	51.9	5.35E+12	1.44E+20
LONGERON	66.9	3.40E+12	9.17E+19
ROW 12	81.9	1.24E+12	3.36E+19
LONGERON	96.9	3.35E+10	1.09E+18
SPACE END	89.2	3.71E+11	1.04E+19
EARTH END	-90.8	2.51E+11	7.18E+18

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	8.67E+12	2.34E+20
SIDE DIR	90.0	3.07E+11	8.70E+18

AVERAGE ATOMIC OXYGEN DENSITY: 1.14E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 665.5 TO 1092.9 K
 ALTITUDE RANGE: 472.3 TO 480.2 KM

 *DATE: NOVEMBER 24, 1984 DAY OF YEAR: 329 *
 *CUMULATIVE EXPOSURE TIME: 231 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	6.20E+06	3.79E+14
LONGERON	126.9	1.85E+01	5.25E+09
ROW 2	141.9	1.25E-05	3.11E+04
LONGERON	156.9	6.36E-11	1.14E+00
ROW 3	171.8	5.49E-14	3.26E-03
LONGERON	173.1	4.52E-14	3.19E-03
ROW 4	158.1	3.38E-11	9.51E-01
LONGERON	143.1	4.01E-06	1.92E+04
ROW 5	128.1	4.17E+00	2.51E+09
LONGERON	113.1	1.78E+06	1.76E+14
ROW 6	98.1	2.01E+10	6.97E+17
LONGERON	83.1	1.08E+12	2.98E+19
ROW 7	68.1	3.24E+12	8.91E+19
LONGERON	53.1	5.21E+12	1.43E+20
ROW 8	38.1	6.83E+12	1.88E+20
LONGERON	23.1	7.99E+12	2.20E+20
ROW 9	8.2	8.60E+12	2.37E+20
LONGERON	6.9	8.62E+12	2.37E+20
ROW 10	21.9	8.06E+12	2.22E+20
LONGERON	36.9	6.94E+12	1.91E+20
ROW 11	51.9	5.36E+12	1.47E+20
LONGERON	66.9	3.41E+12	9.38E+19
ROW 12	81.9	1.25E+12	3.44E+19
LONGERON	96.9	3.46E+10	1.11E+18
SPACE END	89.2	3.72E+11	1.06E+19
EARTH END	-90.8	2.52E+11	7.33E+18

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	8.68E+12	2.39E+20
SIDE DIR	90.0	3.08E+11	8.88E+18

AVERAGE ATOMIC OXYGEN DENSITY: 1.14E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 662.5 TO 1093.4 K
 ALTITUDE RANGE: 471.7 TO 480.9 KM

 *DATE: DECEMBER 1, 1984 DAY OF YEAR: 336 *
 *CUMULATIVE EXPOSURE TIME: 238 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.98E+06	3.82E+14
LONGERON	126.9	1.46E+01	5.26E+09
ROW 2	141.9	1.06E-05	3.11E+04
LONGERON	156.9	5.97E-11	1.14E+00
ROW 3	171.9	5.24E-14	3.26E-03
LONGERON	173.1	3.90E-14	3.19E-03
ROW 4	158.1	2.48E-11	9.51E-01
LONGERON	143.1	2.65E-06	1.92E+04
ROW 5	128.1	2.84E+00	2.51E+09
LONGERON	113.1	1.39E+06	1.77E+14
ROW 6	98.1	1.73E+10	7.07E+17
LONGERON	83.1	9.57E+11	3.04E+19
ROW 7	68.1	2.88E+12	9.09E+19
LONGERON	53.1	4.64E+12	1.46E+20
ROW 8	38.1	6.08E+12	1.92E+20
LONGERON	23.1	7.10E+12	2.24E+20
ROW 9	8.1	7.65E+12	2.41E+20
LONGERON	6.9	7.67E+12	2.42E+20
ROW 10	21.9	7.17E+12	2.26E+20
LONGERON	36.9	6.18E+12	1.95E+20
ROW 11	51.9	4.77E+12	1.50E+20
LONGERON	66.9	3.03E+12	9.56E+19
ROW 12	81.9	1.11E+12	3.50E+19
LONGERON	96.9	2.99E+10	1.13E+18
SPACE END	89.2	3.29E+11	1.08E+19
EARTH END	-90.8	2.22E+11	7.46E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.73E+12	2.44E+20
SIDE DIR	90.0	2.72E+11	9.05E+18

AVERAGE ATOMIC OXYGEN DENSITY: 1.01E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 660.7 TO 1096.0 K
 ALTITUDE RANGE: 471.7 TO 481.4 KM

 *DATE: DECEMBER 8, 1984 DAY OF YEAR: 343 *
 *CUMULATIVE EXPOSURE TIME: 245 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.86E+06	3.85E+14
LONGERON	126.9	1.14E+01	5.27E+09
ROW 2	141.9	9.56E-06	3.11E+04
LONGERON	156.9	5.95E-11	1.14E+00
ROW 3	171.9	5.21E-14	3.26E-03
LONGERON	173.0	3.63E-14	3.19E-03
ROW 4	158.1	2.17E-11	9.51E-01
LONGERON	143.1	2.32E-06	1.92E+04
ROW 5	128.1	2.75E+00	2.51E+09
LONGERON	113.1	1.36E+06	1.78E+14
ROW 6	98.1	1.52E+10	7.16E+17
LONGERON	83.1	8.44E+11	3.09E+19
ROW 7	68.1	2.54E+12	9.24E+19
LONGERON	53.1	4.09E+12	1.49E+20
ROW 8	38.1	5.36E+12	1.95E+20
LONGERON	23.1	6.27E+12	2.28E+20
ROW 9	8.1	6.75E+12	2.45E+20
LONGERON	7.0	6.77E+12	2.46E+20
ROW 10	21.9	6.33E+12	2.30E+20
LONGERON	36.9	5.45E+12	1.98E+20
ROW 11	51.9	4.21E+12	1.53E+20
LONGERON	66.9	2.68E+12	9.72E+19
ROW 12	81.9	9.77E+11	3.56E+19
LONGERON	96.9	2.59E+10	1.15E+18
SPACE END	89.2	2.89E+11	1.10E+19
EARTH END	-90.8	1.95E+11	7.58E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.82E+12	2.48E+20
SIDE DIR	90.0	2.39E+11	9.19E+18

AVERAGE ATOMIC OXYGEN DENSITY: 8.95E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 646.7 TO 1093.4 K
 ALTITUDE RANGE: 471.6 TO 481.3 KM

 *DATE: DECEMBER 15, 1984 DAY OF YEAR: 350 *
 *CUMULATIVE EXPOSURE TIME: 252 DAYS *

AVERAGES AND RANGES ARE BASED ON 1751 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.27E+06	3.87E+14
LONGERON	126.9	9.65E+00	5.27E+09
ROW 2	141.9	8.50E-06	3.11E+04
LONGERON	156.9	5.09E-11	1.14E+00
ROW 3	171.9	4.01E-14	3.26E-03
LONGERON	173.0	2.60E-14	3.19E-03
ROW 4	158.1	1.68E-11	9.51E-01
LONGERON	143.1	2.27E-06	1.92E+04
ROW 5	128.1	3.29E+00	2.51E+09
LONGERON	113.1	1.54E+06	1.79E+14
ROW 6	98.1	1.45E+10	7.25E+17
LONGERON	83.1	7.91E+11	3.14E+19
ROW 7	68.1	2.38E+12	9.39E+19
LONGERON	53.1	3.84E+12	1.51E+20
ROW 8	38.1	5.03E+12	1.98E+20
LONGERON	23.1	5.88E+12	2.31E+20
ROW 9	8.1	6.33E+12	2.49E+20
LONGERON	7.0	6.35E+12	2.50E+20
ROW 10	21.9	5.94E+12	2.33E+20
LONGERON	36.9	5.12E+12	2.01E+20
ROW 11	51.9	3.95E+12	1.55E+20
LONGERON	66.9	2.51E+12	9.87E+19
ROW 12	81.9	9.17E+11	3.62E+19
LONGERON	96.9	2.41E+10	1.16E+18
SPACE END	89.2	2.71E+11	1.12E+19
EARTH END	-90.8	1.83E+11	7.69E+18

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	6.40E+12	2.52E+20
SIDE DIR	90.0	2.24E+11	9.33E+18

AVERAGE ATOMIC OXYGEN DENSITY: 8.40E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 637.5 TO 1091.2 K
 ALTITUDE RANGE: 470.7 TO 481.0 KM

 *DATE: DECEMBER 22, 1984 DAY OF YEAR: 357 *
 *CUMULATIVE EXPOSURE TIME: 259 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.90E+06	3.88E+14
LONGERON	126.9	3.29E+00	5.28E+09
ROW 2	141.9	1.87E-06	3.11E+04
LONGERON	156.9	8.39E-12	1.14E+00
ROW 3	171.9	5.96E-15	3.26E-03
LONGERON	173.0	4.43E-15	3.19E-03
ROW 4	158.1	4.18E-12	9.51E-01
LONGERON	143.1	9.06E-07	1.92E+04
ROW 5	128.1	1.94E+00	2.51E+09
LONGERON	113.1	1.16E+06	1.80E+14
ROW 6	98.1	1.21E+10	7.32E+17
LONGERON	83.1	6.84E+11	3.18E+19
ROW 7	68.1	2.06E+12	9.51E+19
LONGERON	53.1	3.31E+12	1.53E+20
ROW 8	38.1	4.34E+12	2.01E+20
LONGERON	23.1	5.08E+12	2.35E+20
ROW 9	8.1	5.46E+12	2.52E+20
LONGERON	7.0	5.48E+12	2.53E+20
ROW 10	21.9	5.12E+12	2.37E+20
LONGERON	36.9	4.41E+12	2.04E+20
ROW 11	51.9	3.40E+12	1.57E+20
LONGERON	66.9	2.16E+12	1.00E+20
ROW 12	81.9	7.88E+11	3.67E+19
LONGERON	96.9	1.95E+10	1.17E+18
SPACE END	89.2	2.32E+11	1.13E+19
EARTH END	-90.8	1.56E+11	7.79E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.52E+12	2.55E+20
SIDE DIR	90.0	1.91E+11	9.44E+18

AVERAGE ATOMIC OXYGEN DENSITY: 7.23E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 620.5 TO 1072.3 K
 ALTITUDE RANGE: 471.4 TO 479.3 KM

 *DATE: DECEMBER 29, 1984 DAY OF YEAR: 364 *
 *CUMULATIVE EXPOSURE TIME: 266 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.20E+06	3.89E+14
LONGERON	126.9	3.69E+00	5.28E+09
ROW 2	141.9	2.06E-06	3.11E+04
LONGERON	156.9	1.09E-11	1.14E+00
ROW 3	171.8	1.05E-14	3.26E-03
LONGERON	173.1	1.03E-14	3.19E-03
ROW 4	158.1	1.02E-11	9.51E-01
LONGERON	143.1	1.78E-06	1.92E+04
ROW 5	128.1	2.73E+00	2.52E+09
LONGERON	113.1	1.31E+06	1.80E+14
ROW 6	98.1	1.32E+10	7.40E+17
LONGERON	83.1	7.31E+11	3.22E+19
ROW 7	68.1	2.20E+12	9.64E+19
LONGERON	53.1	3.54E+12	1.55E+20
ROW 8	38.1	4.64E+12	2.03E+20
LONGERON	23.1	5.42E+12	2.38E+20
ROW 9	8.2	5.83E+12	2.56E+20
LONGERON	6.9	5.85E+12	2.57E+20
ROW 10	21.9	5.46E+12	2.40E+20
LONGERON	36.9	4.71E+12	2.07E+20
ROW 11	51.9	3.63E+12	1.60E+20
LONGERON	66.9	2.31E+12	1.01E+20
ROW 12	81.9	8.40E+11	3.72E+19
LONGERON	96.9	2.11E+10	1.19E+18
SPACE END	89.2	2.49E+11	1.15E+19
EARTH END	-90.8	1.67E+11	7.89E+18

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	5.89E+12	2.59E+20
SIDE DIR	90.0	2.05E+11	9.57E+18

AVERAGE ATOMIC OXYGEN DENSITY: 7.72E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 620.7 TO 1075.8 K
 ALTITUDE RANGE: 470.6 TO 480.7 KM

 *DATE: JANUARY 5, 1985 DAY OF YEAR: 5 *
 *CUMULATIVE EXPOSURE TIME: 273 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.68E+06	3.91E+14
LONGERON	126.9	4.76E+00	5.28E+09
ROW 2	141.9	2.13E-06	3.11E+04
LONGERON	156.9	8.87E-12	1.14E+00
ROW 3	171.8	7.18E-15	3.26E-03
LONGERON	173.1	6.42E-15	3.19E-03
ROW 4	158.1	6.22E-12	9.52E-01
LONGERON	143.1	1.11E-06	1.92E+04
ROW 5	128.1	1.80E+00	2.52E+09
LONGERON	113.1	1.00E+06	1.81E+14
ROW 6	98.1	1.26E+10	7.48E+17
LONGERON	83.1	7.22E+11	3.27E+19
ROW 7	68.1	2.17E+12	9.77E+19
LONGERON	53.1	3.50E+12	1.57E+20
ROW 8	38.1	4.59E+12	2.06E+20
LONGERON	23.1	5.36E+12	2.41E+20
ROW 9	8.2	5.77E+12	2.59E+20
LONGERON	6.9	5.79E+12	2.60E+20
ROW 10	21.9	5.41E+12	2.43E+20
LONGERON	36.9	4.66E+12	2.10E+20
ROW 11	51.9	3.60E+12	1.62E+20
LONGERON	66.9	2.29E+12	1.03E+20
ROW 12	81.9	8.34E+11	3.77E+19
LONGERON	96.9	2.13E+10	1.20E+18
SPACE END	89.2	2.46E+11	1.16E+19
EARTH END	-90.8	1.65E+11	7.99E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.83E+12	2.62E+20
SIDE DIR	90.0	2.03E+11	9.69E+18

AVERAGE ATOMIC OXYGEN DENSITY: 7.64E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 617.7 TO 1065.1 K
 ALTITUDE RANGE: 470.5 TO 481.7 KM

 *DATE: JANUARY 12, 1985 DAY OF YEAR: 12 *
 *CUMULATIVE EXPOSURE TIME: 280 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.27E+06	3.93E+14
LONGERON	126.9	7.46E+00	5.29E+09
ROW 2	141.9	3.83E-06	3.11E+04
LONGERON	156.9	1.58E-11	1.14E+00
ROW 3	171.8	1.20E-14	3.26E-03
LONGERON	173.1	9.55E-15	3.19E-03
ROW 4	158.1	7.62E-12	9.52E-01
LONGERON	143.1	1.09E-06	1.92E+04
ROW 5	128.1	1.52E+00	2.52E+09
LONGERON	113.1	8.63E+05	1.82E+14
ROW 6	98.1	1.24E+10	7.55E+17
LONGERON	83.1	7.22E+11	3.31E+19
ROW 7	68.1	2.18E+12	9.91E+19
LONGERON	53.1	3.51E+12	1.59E+20
ROW 8	38.1	4.60E+12	2.09E+20
LONGERON	23.1	5.37E+12	2.44E+20
ROW 9	8.2	5.78E+12	2.63E+20
LONGERON	6.9	5.80E+12	2.64E+20
ROW 10	21.9	5.42E+12	2.46E+20
LONGERON	36.9	4.67E+12	2.12E+20
ROW 11	51.9	3.60E+12	1.64E+20
LONGERON	66.9	2.29E+12	1.04E+20
ROW 12	81.9	8.36E+11	3.82E+19
LONGERON	96.9	2.18E+10	1.21E+18
SPACE END	89.2	2.47E+11	1.18E+19
EARTH END	-90.8	1.65E+11	8.09E+18

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	5.84E+12	2.66E+20
SIDE DIR	90.0	2.03E+11	9.81E+18

AVERAGE ATOMIC OXYGEN DENSITY: 7.66E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 614.8 TO 1071.0 K
 ALTITUDE RANGE: 470.5 TO 481.7 KM

 *DATE: JANUARY 19, 1985 DAY OF YEAR: 19 *
 *CUMULATIVE EXPOSURE TIME: 287 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.56E+06	3.94E+14
LONGERON	126.9	5.11E+00	5.29E+09
ROW 2	141.9	2.55E-06	3.11E+04
LONGERON	156.9	1.07E-11	1.14E+00
ROW 3	171.9	7.97E-15	3.26E-03
LONGERON	173.0	6.00E-15	3.19E-03
ROW 4	158.1	4.59E-12	9.52E-01
LONGERON	143.1	6.73E-07	1.92E+04
ROW 5	128.1	1.08E+00	2.52E+09
LONGERON	113.1	7.53E+05	1.82E+14
ROW 6	98.1	1.14E+10	7.62E+17
LONGERON	83.1	6.79E+11	3.35E+19
ROW 7	68.1	2.05E+12	1.00E+20
LONGERON	53.1	3.30E+12	1.61E+20
ROW 8	38.1	4.32E+12	2.12E+20
LONGERON	23.1	5.05E+12	2.47E+20
ROW 9	8.1	5.43E+12	2.66E+20
LONGERON	7.0	5.45E+12	2.67E+20
ROW 10	21.9	5.09E+12	2.50E+20
LONGERON	36.9	4.39E+12	2.15E+20
ROW 11	51.9	3.39E+12	1.66E+20
LONGERON	66.9	2.15E+12	1.06E+20
ROW 12	81.9	7.85E+11	3.87E+19
LONGERON	96.9	1.98E+10	1.22E+18
SPACE END	89.2	2.31E+11	1.19E+19
EARTH END	-90.8	1.55E+11	8.18E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.49E+12	2.69E+20
SIDE DIR	90.0	1.90E+11	9.93E+18

AVERAGE ATOMIC OXYGEN DENSITY: 7.20E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 629.0 TO 1064.7 K
 ALTITUDE RANGE: 470.5 TO 480.4 KM

 *DATE: JANUARY 26, 1985 DAY OF YEAR: 26 *
 *CUMULATIVE EXPOSURE TIME: 294 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.24E+06	3.96E+14
LONGERON	126.9	4.55E+00	5.29E+09
ROW 2	141.9	2.56E-06	3.11E+04
LONGERON	156.9	1.09E-11	1.14E+00
ROW 3	171.9	7.17E-15	3.26E-03
LONGERON	173.0	4.61E-15	3.19E-03
ROW 4	158.1	3.36E-12	9.52E-01
LONGERON	143.1	5.79E-07	1.92E+04
ROW 5	128.1	1.22E+00	2.52E+09
LONGERON	113.1	8.82E+05	1.83E+14
ROW 6	98.1	1.13E+10	7.69E+17
LONGERON	83.1	6.64E+11	3.39E+19
ROW 7	68.1	2.01E+12	1.02E+20
LONGERON	53.1	3.23E+12	1.63E+20
ROW 8	38.1	4.23E+12	2.14E+20
LONGERON	23.1	4.95E+12	2.50E+20
ROW 9	8.1	5.33E+12	2.69E+20
LONGERON	7.0	5.34E+12	2.70E+20
ROW 10	21.9	4.99E+12	2.53E+20
LONGERON	36.9	4.31E+12	2.18E+20
ROW 11	51.9	3.32E+12	1.68E+20
LONGERON	66.9	2.11E+12	1.07E+20
ROW 12	81.9	7.72E+11	3.91E+19
LONGERON	96.9	1.95E+10	1.24E+18
SPACE END	89.2	2.26E+11	1.20E+19
EARTH END	-90.8	1.52E+11	8.27E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.38E+12	2.72E+20
SIDE DIR	90.0	1.86E+11	1.00E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.06E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 632.9 TO 1062.1 K
 ALTITUDE RANGE: 471.0 TO 479.2 KM

 *DATE: FEBRUARY 2, 1985 DAY OF YEAR: 33 *
 *CUMULATIVE EXPOSURE TIME: 301 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.51E+06	3.97E+14
LONGERON	126.9	2.15E+00	5.29E+09
ROW 2	141.9	9.53E-07	3.11E+04
LONGERON	156.9	3.35E-12	1.14E+00
ROW 3	171.9	1.98E-15	3.26E-03
LONGERON	173.0	1.31E-15	3.19E-03
ROW 4	158.1	1.20E-12	9.52E-01
LONGERON	143.1	3.09E-07	1.92E+04
ROW 5	128.1	9.53E-01	2.52E+09
LONGERON	113.1	8.22E+05	1.83E+14
ROW 6	98.1	1.07E+10	7.76E+17
LONGERON	83.1	6.30E+11	3.43E+19
ROW 7	68.1	1.90E+12	1.03E+20
LONGERON	53.1	3.06E+12	1.65E+20
ROW 8	38.1	4.01E+12	2.17E+20
LONGERON	23.1	4.69E+12	2.53E+20
ROW 9	8.1	5.05E+12	2.73E+20
LONGERON	7.0	5.06E+12	2.73E+20
ROW 10	21.9	4.73E+12	2.55E+20
LONGERON	36.9	4.08E+12	2.20E+20
ROW 11	51.9	3.15E+12	1.70E+20
LONGERON	66.9	2.00E+12	1.08E+20
ROW 12	81.9	7.30E+11	3.96E+19
LONGERON	96.9	1.76E+10	1.25E+18
SPACE END	89.2	2.13E+11	1.22E+19
EARTH END	-90.8	1.43E+11	8.36E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.10E+12	2.75E+20
SIDE DIR	90.0	1.75E+11	1.01E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.69E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 625.8 TO 1050.3 K
 ALTITUDE RANGE: 470.4 TO 481.0 KM

 *DATE: FEBRUARY 9, 1985 DAY OF YEAR: 40 *
 *CUMULATIVE EXPOSURE TIME: 308 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.33E+06	3.97E+14
LONGERON	126.9	1.18E+00	5.29E+09
ROW 2	141.9	3.18E-07	3.11E+04
LONGERON	156.9	8.13E-13	1.14E+00
ROW 3	171.9	4.79E-16	3.26E-03
LONGERON	173.1	4.47E-16	3.19E-03
ROW 4	158.1	6.83E-13	9.52E-01
LONGERON	143.1	2.56E-07	1.92E+04
ROW 5	128.1	9.15E-01	2.52E+09
LONGERON	113.1	8.36E+05	1.84E+14
ROW 6	98.1	1.14E+10	7.83E+17
LONGERON	83.1	6.72E+11	3.47E+19
ROW 7	68.1	2.02E+12	1.04E+20
LONGERON	53.1	3.26E+12	1.67E+20
ROW 8	38.1	4.27E+12	2.19E+20
LONGERON	23.1	4.99E+12	2.56E+20
ROW 9	8.1	5.37E+12	2.76E+20
LONGERON	6.9	5.38E+12	2.77E+20
ROW 10	21.9	5.03E+12	2.58E+20
LONGERON	36.9	4.33E+12	2.23E+20
ROW 11	51.9	3.34E+12	1.72E+20
LONGERON	66.9	2.12E+12	1.09E+20
ROW 12	81.9	7.73E+11	4.00E+19
LONGERON	96.9	1.83E+10	1.26E+18
SPACE END	89.2	2.26E+11	1.23E+19
EARTH END	-90.8	1.52E+11	8.45E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.42E+12	2.79E+20
SIDE DIR	90.0	1.86E+11	1.03E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.11E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 630.2 TO 1028.6 K
 ALTITUDE RANGE: 470.4 TO 481.4 KM

 *DATE: FEBRUARY 16, 1985 DAY OF YEAR: 47 *
 *CUMULATIVE EXPOSURE TIME: 315 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.42E+06	3.98E+14
LONGERON	126.9	1.07E+00	5.29E+09
ROW 2	141.9	1.98E-07	3.11E+04
LONGERON	156.9	3.93E-13	1.14E+00
ROW 3	171.8	2.11E-16	3.26E-03
LONGERON	173.1	1.93E-16	3.19E-03
ROW 4	158.1	2.98E-13	9.52E-01
LONGERON	143.1	1.19E-07	1.92E+04
ROW 5	128.1	4.98E-01	2.52E+09
LONGERON	113.1	6.05E+05	1.84E+14
ROW 6	98.1	1.10E+10	7.89E+17
LONGERON	83.1	6.82E+11	3.51E+19
ROW 7	68.1	2.06E+12	1.05E+20
LONGERON	53.1	3.31E+12	1.69E+20
ROW 8	38.1	4.34E+12	2.22E+20
LONGERON	23.1	5.08E+12	2.59E+20
ROW 9	8.2	5.46E+12	2.79E+20
LONGERON	6.9	5.48E+12	2.80E+20
ROW 10	21.9	5.12E+12	2.62E+20
LONGERON	36.9	4.41E+12	2.25E+20
ROW 11	51.9	3.40E+12	1.74E+20
LONGERON	66.9	2.16E+12	1.11E+20
ROW 12	81.9	7.88E+11	4.05E+19
LONGERON	96.9	1.86E+10	1.27E+18
SPACE END	89.2	2.29E+11	1.24E+19
EARTH END	-90.8	1.53E+11	8.54E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.52E+12	2.82E+20
SIDE DIR	90.0	1.89E+11	1.04E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.23E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 639.3 TO 1019.9 K
 ALTITUDE RANGE: 470.3 TO 481.1 KM

 *DATE: FEBRUARY 23, 1985 DAY OF YEAR: 54 *
 *CUMULATIVE EXPOSURE TIME: 322 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.68E+06	3.99E+14
LONGERON	126.9	1.60E+00	5.29E+09
ROW 2	141.9	2.34E-07	3.11E+04
LONGERON	156.9	2.27E-13	1.14E+00
ROW 3	171.8	5.24E-17	3.26E-03
LONGERON	173.1	2.69E-17	3.19E-03
ROW 4	158.1	3.77E-14	9.52E-01
LONGERON	143.1	2.08E-08	1.92E+04
ROW 5	128.1	1.51E-01	2.52E+09
LONGERON	113.1	3.58E+05	1.84E+14
ROW 6	98.1	1.01E+10	7.95E+17
LONGERON	83.1	6.65E+11	3.55E+19
ROW 7	68.1	2.01E+12	1.06E+20
LONGERON	53.1	3.24E+12	1.71E+20
ROW 8	38.1	4.24E+12	2.24E+20
LONGERON	23.1	4.96E+12	2.62E+20
ROW 9	8.2	5.34E+12	2.82E+20
LONGERON	6.9	5.35E+12	2.83E+20
ROW 10	21.9	5.00E+12	2.65E+20
LONGERON	36.9	4.31E+12	2.28E+20
ROW 11	51.9	3.33E+12	1.76E+20
LONGERON	66.9	2.12E+12	1.12E+20
ROW 12	81.9	7.71E+11	4.10E+19
LONGERON	96.9	1.82E+10	1.28E+18
SPACE END	89.2	2.23E+11	1.26E+19
EARTH END	-90.8	1.48E+11	8.63E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.39E+12	2.85E+20
SIDE DIR	90.0	1.83E+11	1.05E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.07E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 640.7 TO 970.0 K
 ALTITUDE RANGE: 470.6 TO 479.4 KM

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*DATE:      MARCH  2, 1985      DAY OF YEAR:  61 *
*CUMULATIVE EXPOSURE TIME: 329 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.60E+06	4.01E+14
LONGERON	126.9	3.09E+00	5.30E+09
ROW 2	141.9	7.00E-07	3.11E+04
LONGERON	156.9	1.33E-12	1.14E+00
ROW 3	171.9	6.19E-16	3.26E-03
LONGERON	173.1	4.54E-16	3.19E-03
ROW 4	158.1	5.11E-13	9.52E-01
LONGERON	143.1	1.46E-07	1.92E+04
ROW 5	128.1	5.00E-01	2.52E+09
LONGERON	113.1	6.71E+05	1.85E+14
ROW 6	98.1	1.37E+10	8.04E+17
LONGERON	83.1	8.29E+11	3.60E+19
ROW 7	68.1	2.50E+12	1.08E+20
LONGERON	53.1	4.03E+12	1.74E+20
ROW 8	38.1	5.28E+12	2.28E+20
LONGERON	23.1	6.17E+12	2.66E+20
ROW 9	8.1	6.64E+12	2.86E+20
LONGERON	6.9	6.66E+12	2.87E+20
ROW 10	21.9	6.23E+12	2.68E+20
LONGERON	36.9	5.37E+12	2.31E+20
ROW 11	51.9	4.14E+12	1.78E+20
LONGERON	66.9	2.63E+12	1.13E+20
ROW 12	81.9	9.60E+11	4.15E+19
LONGERON	96.9	2.41E+10	1.29E+18
SPACE END	89.2	2.82E+11	1.27E+19
EARTH END	-90.8	1.89E+11	8.75E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.71E+12	2.89E+20
SIDE DIR	90.0	2.32E+11	1.06E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.80E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 655.5 TO 1020.0 K
 ALTITUDE RANGE: 470.3 TO 479.7 KM

 *DATE: MARCH 9, 1985 DAY OF YEAR: 68 *
 *CUMULATIVE EXPOSURE TIME: 336 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.78E+06	4.02E+14
LONGERON	126.9	1.45E+00	5.30E+09
ROW 2	141.9	2.94E-07	3.11E+04
LONGERON	156.9	6.08E-13	1.14E+00
ROW 3	171.9	3.05E-16	3.26E-03
LONGERON	173.0	2.32E-16	3.19E-03
ROW 4	158.1	2.86E-13	9.52E-01
LONGERON	143.1	1.02E-07	1.92E+04
ROW 5	128.1	4.66E-01	2.52E+09
LONGERON	113.1	6.73E+05	1.85E+14
ROW 6	98.1	1.28E+10	8.11E+17
LONGERON	83.1	7.84E+11	3.65E+19
ROW 7	68.1	2.37E+12	1.09E+20
LONGERON	53.1	3.81E+12	1.76E+20
ROW 8	38.1	4.99E+12	2.31E+20
LONGERON	23.1	5.83E+12	2.70E+20
ROW 9	8.1	6.28E+12	2.90E+20
LONGERON	7.0	6.29E+12	2.91E+20
ROW 10	21.9	5.88E+12	2.72E+20
LONGERON	36.9	5.07E+12	2.34E+20
ROW 11	51.9	3.91E+12	1.81E+20
LONGERON	66.9	2.49E+12	1.15E+20
ROW 12	81.9	9.06E+11	4.21E+19
LONGERON	96.9	2.19E+10	1.31E+18
SPACE END	89.2	2.65E+11	1.29E+19
EARTH END	-90.8	1.77E+11	8.85E+18

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	6.34E+12	2.93E+20
SIDE DIR	90.0	2.18E+11	1.08E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.31E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 656.4 TO 1011.8 K
 ALTITUDE RANGE: 470.1 TO 481.1 KM

 *DATE: MARCH 16, 1985 DAY OF YEAR: 75 *
 *CUMULATIVE EXPOSURE TIME: 343 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	8.69E+05	4.02E+14
LONGERON	126.9	2.81E-01	5.30E+09
ROW 2	141.9	2.28E-08	3.11E+04
LONGERON	156.9	2.37E-14	1.14E+00
ROW 3	171.9	1.02E-17	3.26E-03
LONGERON	173.0	1.34E-17	3.19E-03
ROW 4	158.1	4.43E-14	9.52E-01
LONGERON	143.1	4.13E-08	1.92E+04
ROW 5	128.1	3.29E-01	2.52E+09
LONGERON	113.1	5.39E+05	1.85E+14
ROW 6	98.1	1.05E+10	8.18E+17
LONGERON	83.1	6.73E+11	3.69E+19
ROW 7	68.1	2.03E+12	1.11E+20
LONGERON	53.1	3.27E+12	1.78E+20
ROW 8	38.1	4.29E+12	2.33E+20
LONGERON	23.1	5.02E+12	2.73E+20
ROW 9	8.1	5.40E+12	2.93E+20
LONGERON	7.0	5.41E+12	2.94E+20
ROW 10	21.9	5.06E+12	2.75E+20
LONGERON	36.9	4.36E+12	2.37E+20
ROW 11	51.9	3.36E+12	1.83E+20
LONGERON	66.9	2.14E+12	1.16E+20
ROW 12	81.9	7.78E+11	4.26E+19
LONGERON	96.9	1.75E+10	1.32E+18
SPACE END	89.2	2.24E+11	1.30E+19
EARTH END	-90.8	1.49E+11	8.95E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.45E+12	2.96E+20
SIDE DIR	90.0	1.85E+11	1.09E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.15E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 653.4 TO 949.0 K
 ALTITUDE RANGE: 470.0 TO 481.1 KM

 *DATE: MARCH 23, 1985 DAY OF YEAR: 82 *
 *CUMULATIVE EXPOSURE TIME: 350 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	6.82E+05	4.03E+14
LONGERON	126.9	1.57E-01	5.30E+09
ROW 2	141.9	1.14E-08	3.11E+04
LONGERON	156.9	1.52E-14	1.14E+00
ROW 3	171.9	8.83E-18	3.26E-03
LONGERON	173.0	1.33E-17	3.19E-03
ROW 4	158.1	4.47E-14	9.52E-01
LONGERON	143.1	4.07E-08	1.92E+04
ROW 5	128.1	3.16E-01	2.52E+09
LONGERON	113.1	5.00E+05	1.86E+14
ROW 6	98.1	9.83E+09	8.24E+17
LONGERON	83.1	6.43E+11	3.73E+19
ROW 7	68.1	1.94E+12	1.12E+20
LONGERON	53.1	3.13E+12	1.80E+20
ROW 8	38.1	4.10E+12	2.36E+20
LONGERON	23.1	4.79E+12	2.75E+20
ROW 9	8.1	5.16E+12	2.96E+20
LONGERON	7.0	5.17E+12	2.97E+20
ROW 10	21.9	4.84E+12	2.78E+20
LONGERON	36.9	4.17E+12	2.39E+20
ROW 11	51.9	3.21E+12	1.85E+20
LONGERON	66.9	2.04E+12	1.17E+20
ROW 12	81.9	7.43E+11	4.30E+19
LONGERON	96.9	1.63E+10	1.33E+18
SPACE END	89.2	2.13E+11	1.32E+19
EARTH END	-90.8	1.42E+11	9.03E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.21E+12	3.00E+20
SIDE DIR	90.0	1.75E+11	1.10E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.83E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 651.9 TO 913.7 K
 ALTITUDE RANGE: 470.0 TO 480.4 KM

 *DATE: MARCH 30, 1985 DAY OF YEAR: 89 *
 *CUMULATIVE EXPOSURE TIME: 357 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.44E+06	4.04E+14
LONGERON	126.9	9.71E-01	5.30E+09
ROW 2	141.9	1.61E-07	3.11E+04
LONGERON	156.9	2.44E-13	1.14E+00
ROW 3	171.9	9.56E-17	3.26E-03
LONGERON	173.1	7.38E-17	3.19E-03
ROW 4	158.1	1.23E-13	9.52E-01
LONGERON	143.1	6.54E-08	1.92E+04
ROW 5	128.1	3.92E-01	2.52E+09
LONGERON	113.1	6.29E+05	1.86E+14
ROW 6	98.1	1.24E+10	8.31E+17
LONGERON	83.1	7.78E+11	3.78E+19
ROW 7	68.1	2.35E+12	1.13E+20
LONGERON	53.1	3.79E+12	1.82E+20
ROW 8	38.1	4.96E+12	2.39E+20
LONGERON	23.1	5.80E+12	2.79E+20
ROW 9	8.1	6.24E+12	3.00E+20
LONGERON	6.9	6.26E+12	3.01E+20
ROW 10	21.9	5.85E+12	2.81E+20
LONGERON	36.9	5.04E+12	2.43E+20
ROW 11	51.9	3.89E+12	1.87E+20
LONGERON	66.9	2.47E+12	1.19E+20
ROW 12	81.9	9.01E+11	4.36E+19
LONGERON	96.9	2.12E+10	1.34E+18
SPACE END	89.2	2.62E+11	1.33E+19
EARTH END	-90.8	1.75E+11	9.14E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.31E+12	3.03E+20
SIDE DIR	90.0	2.15E+11	1.11E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.26E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 658.4 TO 947.3 K
 ALTITUDE RANGE: 470.9 TO 478.4 KM

 *DATE: APRIL 6, 1985 DAY OF YEAR: 96 *
 *CUMULATIVE EXPOSURE TIME: 364 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.19E+06	4.06E+14
LONGERON	126.9	4.30E+00	5.30E+09
ROW 2	141.9	1.03E-06	3.11E+04
LONGERON	156.9	1.55E-12	1.14E+00
ROW 3	171.8	4.32E-16	3.26E-03
LONGERON	173.1	1.95E-16	3.19E-03
ROW 4	158.1	1.93E-13	9.52E-01
LONGERON	143.1	7.59E-08	1.92E+04
ROW 5	128.1	4.41E-01	2.52E+09
LONGERON	113.1	8.07E+05	1.86E+14
ROW 6	98.1	1.62E+10	8.41E+17
LONGERON	83.1	9.57E+11	3.84E+19
ROW 7	68.1	2.89E+12	1.15E+20
LONGERON	53.1	4.65E+12	1.85E+20
ROW 8	38.1	6.10E+12	2.42E+20
LONGERON	23.1	7.13E+12	2.83E+20
ROW 9	8.2	7.68E+12	3.05E+20
LONGERON	6.9	7.70E+12	3.06E+20
ROW 10	21.9	7.19E+12	2.86E+20
LONGERON	36.9	6.20E+12	2.46E+20
ROW 11	51.9	4.79E+12	1.90E+20
LONGERON	66.9	3.04E+12	1.21E+20
ROW 12	81.9	1.11E+12	4.42E+19
LONGERON	96.9	2.83E+10	1.36E+18
SPACE END	89.2	3.27E+11	1.35E+19
EARTH END	-90.8	2.19E+11	9.27E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.75E+12	3.08E+20
SIDE DIR	90.0	2.69E+11	1.13E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.02E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 674.5 TO 972.6 K
 ALTITUDE RANGE: 469.8 TO 480.1 KM

 *DATE: APRIL 13, 1985 DAY OF YEAR: 103 *
 *CUMULATIVE EXPOSURE TIME: 371 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.98E+06	4.07E+14
LONGERON	126.9	3.60E+00	5.30E+09
ROW 2	141.9	7.00E-07	3.11E+04
LONGERON	156.9	9.06E-13	1.14E+00
ROW 3	171.8	2.52E-16	3.26E-03
LONGERON	173.1	1.26E-16	3.19E-03
ROW 4	158.1	1.34E-13	9.52E-01
LONGERON	143.1	5.16E-08	1.92E+04
ROW 5	128.1	2.95E-01	2.52E+09
LONGERON	113.1	6.34E+05	1.87E+14
ROW 6	98.1	1.49E+10	8.50E+17
LONGERON	83.1	9.08E+11	3.89E+19
ROW 7	68.1	2.74E+12	1.17E+20
LONGERON	53.1	4.41E+12	1.88E+20
ROW 8	38.1	5.79E+12	2.46E+20
LONGERON	23.1	6.77E+12	2.87E+20
ROW 9	8.2	7.28E+12	3.09E+20
LONGERON	6.9	7.30E+12	3.10E+20
ROW 10	21.9	6.83E+12	2.90E+20
LONGERON	36.9	5.88E+12	2.50E+20
ROW 11	51.9	4.54E+12	1.93E+20
LONGERON	66.9	2.89E+12	1.23E+20
ROW 12	81.9	1.05E+12	4.49E+19
LONGERON	96.9	2.65E+10	1.37E+18
SPACE END	89.2	3.09E+11	1.37E+19
EARTH END	-90.8	2.06E+11	9.39E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.36E+12	3.12E+20
SIDE DIR	90.0	2.54E+11	1.14E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.64E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 662.9 TO 965.5 K
 ALTITUDE RANGE: 469.8 TO 480.9 KM

 *DATE: APRIL 20, 1985 DAY OF YEAR: 110 *
 *CUMULATIVE EXPOSURE TIME: 378 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.18E+06	4.10E+14
LONGERON	126.9	5.89E+00	5.31E+09
ROW 2	141.9	1.85E-06	3.11E+04
LONGERON	156.9	5.30E-12	1.14E+00
ROW 3	171.9	3.29E-15	3.26E-03
LONGERON	173.1	2.73E-15	3.19E-03
ROW 4	158.1	3.09E-12	9.52E-01
LONGERON	143.1	7.62E-07	1.92E+04
ROW 5	128.1	1.85E+00	2.52E+09
LONGERON	113.1	1.47E+06	1.88E+14
ROW 6	98.1	1.96E+10	8.62E+17
LONGERON	83.1	1.08E+12	3.96E+19
ROW 7	68.1	3.25E+12	1.18E+20
LONGERON	53.1	5.23E+12	1.91E+20
ROW 8	38.1	6.86E+12	2.50E+20
LONGERON	23.1	8.02E+12	2.92E+20
ROW 9	8.1	8.63E+12	3.15E+20
LONGERON	6.9	8.65E+12	3.15E+20
ROW 10	21.9	8.09E+12	2.95E+20
LONGERON	36.9	6.97E+12	2.54E+20
ROW 11	51.9	5.38E+12	1.96E+20
LONGERON	66.9	3.42E+12	1.25E+20
ROW 12	81.9	1.25E+12	4.56E+19
LONGERON	96.9	3.34E+10	1.39E+18
SPACE END	89.2	3.72E+11	1.39E+19
EARTH END	-90.8	2.51E+11	9.55E+18

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	8.72E+12	3.18E+20
SIDE DIR	90.0	3.07E+11	1.16E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.14E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 672.3 TO 1084.8 K
 ALTITUDE RANGE: 469.7 TO 480.9 KM

 *DATE: APRIL 27, 1985 DAY OF YEAR: 117 *
 *CUMULATIVE EXPOSURE TIME: 385 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	5.58E+06	4.13E+14
LONGERON	126.9	1.12E+01	5.31E+09
ROW 2	141.9	6.35E-06	3.11E+04
LONGERON	156.9	2.99E-11	1.14E+00
ROW 3	171.9	2.43E-14	3.26E-03
LONGERON	173.0	2.12E-14	3.19E-03
ROW 4	158.1	2.13E-11	9.52E-01
LONGERON	143.1	4.14E-06	1.92E+04
ROW 5	128.1	6.81E+00	2.53E+09
LONGERON	113.1	3.06E+06	1.90E+14
ROW 6	98.1	2.53E+10	8.77E+17
LONGERON	83.1	1.25E+12	4.03E+19
ROW 7	68.1	3.73E+12	1.21E+20
LONGERON	53.1	6.01E+12	1.94E+20
ROW 8	38.1	7.87E+12	2.55E+20
LONGERON	23.1	9.20E+12	2.98E+20
ROW 9	8.1	9.90E+12	3.21E+20
LONGERON	7.0	9.92E+12	3.21E+20
ROW 10	21.9	9.27E+12	3.00E+20
LONGERON	36.9	7.99E+12	2.59E+20
ROW 11	51.9	6.16E+12	2.00E+20
LONGERON	66.9	3.92E+12	1.27E+20
ROW 12	81.9	1.43E+12	4.65E+19
LONGERON	96.9	3.99E+10	1.42E+18
SPACE END	89.2	4.32E+11	1.42E+19
EARTH END	-90.8	2.94E+11	9.72E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.00E+13	3.24E+20
SIDE DIR	90.0	3.59E+11	1.18E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.31E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 702.5 TO 1119.3 K
 ALTITUDE RANGE: 469.8 TO 479.4 KM

 *DATE: MAY 4, 1985 DAY OF YEAR: 124 *
 *CUMULATIVE EXPOSURE TIME: 392 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.38E+06	4.15E+14
LONGERON	126.9	4.46E+00	5.32E+09
ROW 2	141.9	1.77E-06	3.11E+04
LONGERON	156.9	6.72E-12	1.14E+00
ROW 3	171.9	5.20E-15	3.26E-03
LONGERON	173.0	5.04E-15	3.19E-03
ROW 4	158.1	6.34E-12	9.52E-01
LONGERON	143.1	1.67E-06	1.92E+04
ROW 5	128.1	3.79E+00	2.53E+09
LONGERON	113.1	2.15E+06	1.91E+14
ROW 6	98.1	1.99E+10	8.89E+17
LONGERON	83.1	1.04E+12	4.09E+19
ROW 7	68.1	3.11E+12	1.23E+20
LONGERON	53.1	5.00E+12	1.97E+20
ROW 8	38.1	6.56E+12	2.59E+20
LONGERON	23.1	7.66E+12	3.02E+20
ROW 9	8.1	8.25E+12	3.25E+20
LONGERON	7.0	8.27E+12	3.26E+20
ROW 10	21.9	7.73E+12	3.05E+20
LONGERON	36.9	6.66E+12	2.63E+20
ROW 11	51.9	5.14E+12	2.03E+20
LONGERON	66.9	3.26E+12	1.29E+20
ROW 12	81.9	1.19E+12	4.72E+19
LONGERON	96.9	3.15E+10	1.44E+18
SPACE END	89.2	3.56E+11	1.44E+19
EARTH END	-90.8	2.41E+11	9.87E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	8.33E+12	3.29E+20
SIDE DIR	90.0	2.95E+11	1.20E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.09E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 675.9 TO 1103.5 K
 ALTITUDE RANGE: 469.9 TO 478.5 KM

 *DATE: MAY 11, 1985 DAY OF YEAR: 131 *
 *CUMULATIVE EXPOSURE TIME: 399 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.52E+06	4.17E+14
LONGERON	126.9	2.86E+00	5.32E+09
ROW 2	141.9	8.49E-07	3.11E+04
LONGERON	156.9	2.30E-12	1.14E+00
ROW 3	171.9	1.41E-15	3.26E-03
LONGERON	173.1	1.27E-15	3.19E-03
ROW 4	158.1	1.72E-12	9.52E-01
LONGERON	143.1	5.62E-07	1.92E+04
ROW 5	128.1	1.75E+00	2.53E+09
LONGERON	113.1	1.35E+06	1.92E+14
ROW 6	98.1	1.57E+10	8.99E+17
LONGERON	83.1	8.78E+11	4.15E+19
ROW 7	68.1	2.65E+12	1.24E+20
LONGERON	53.1	4.26E+12	2.00E+20
ROW 8	38.1	5.59E+12	2.62E+20
LONGERON	23.1	6.53E+12	3.06E+20
ROW 9	8.1	7.03E+12	3.30E+20
LONGERON	6.9	7.05E+12	3.31E+20
ROW 10	21.9	6.59E+12	3.09E+20
LONGERON	36.9	5.68E+12	2.66E+20
ROW 11	51.9	4.38E+12	2.06E+20
LONGERON	66.9	2.79E+12	1.31E+20
ROW 12	81.9	1.02E+12	4.78E+19
LONGERON	96.9	2.60E+10	1.45E+18
SPACE END	89.2	3.00E+11	1.46E+19
EARTH END	-90.8	2.02E+11	9.99E+18

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.10E+12	3.33E+20
SIDE DIR	90.0	2.48E+11	1.22E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.30E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 674.9 TO 994.7 K
 ALTITUDE RANGE: 469.4 TO 480.2 KM

 *DATE: MAY 18, 1985 DAY OF YEAR: 138 *
 *CUMULATIVE EXPOSURE TIME: 406 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.03E+06	4.19E+14
LONGERON	126.9	8.50E+00	5.32E+09
ROW 2	141.9	3.83E-06	3.11E+04
LONGERON	156.9	1.10E-11	1.14E+00
ROW 3	171.8	4.99E-15	3.26E-03
LONGERON	173.1	2.74E-15	3.19E-03
ROW 4	158.1	2.27E-12	9.52E-01
LONGERON	143.1	5.27E-07	1.92E+04
ROW 5	128.1	1.47E+00	2.53E+09
LONGERON	113.1	1.26E+06	1.92E+14
ROW 6	98.1	1.67E+10	9.09E+17
LONGERON	83.1	9.30E+11	4.20E+19
ROW 7	68.1	2.81E+12	1.26E+20
LONGERON	53.1	4.52E+12	2.03E+20
ROW 8	38.1	5.93E+12	2.66E+20
LONGERON	23.1	6.93E+12	3.11E+20
ROW 9	8.2	7.46E+12	3.34E+20
LONGERON	6.9	7.48E+12	3.35E+20
ROW 10	21.9	6.99E+12	3.13E+20
LONGERON	36.9	6.03E+12	2.70E+20
ROW 11	51.9	4.65E+12	2.08E+20
LONGERON	66.9	2.96E+12	1.32E+20
ROW 12	81.9	1.08E+12	4.85E+19
LONGERON	96.9	2.91E+10	1.47E+18
SPACE END	89.2	3.21E+11	1.48E+19
EARTH END	-90.8	2.17E+11	1.01E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	7.54E+12	3.38E+20
SIDE DIR	90.0	2.65E+11	1.23E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.88E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 681.7 TO 1010.3 K
 ALTITUDE RANGE: 469.5 TO 480.5 KM

 *DATE: MAY 25, 1985 DAY OF YEAR: 145 *
 *CUMULATIVE EXPOSURE TIME: 413 DAYS *

AVERAGES AND RANGES ARE BASED ON 1751 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.95E+06	4.22E+14
LONGERON	126.9	8.06E+00	5.33E+09
ROW 2	141.9	2.97E-06	3.11E+04
LONGERON	156.9	6.74E-12	1.14E+00
ROW 3	171.8	2.51E-15	3.26E-03
LONGERON	173.1	1.19E-15	3.19E-03
ROW 4	158.1	9.09E-13	9.52E-01
LONGERON	143.1	2.09E-07	1.92E+04
ROW 5	128.1	6.70E-01	2.53E+09
LONGERON	113.1	8.41E+05	1.93E+14
ROW 6	98.1	1.48E+10	9.18E+17
LONGERON	83.1	8.53E+11	4.25E+19
ROW 7	68.1	2.57E+12	1.27E+20
LONGERON	53.1	4.15E+12	2.05E+20
ROW 8	38.1	5.44E+12	2.69E+20
LONGERON	23.1	6.36E+12	3.14E+20
ROW 9	8.2	6.84E+12	3.38E+20
LONGERON	6.9	6.86E+12	3.39E+20
ROW 10	21.9	6.42E+12	3.17E+20
LONGERON	36.9	5.53E+12	2.73E+20
ROW 11	51.9	4.27E+12	2.11E+20
LONGERON	66.9	2.72E+12	1.34E+20
ROW 12	81.9	9.93E+11	4.91E+19
LONGERON	96.9	2.65E+10	1.49E+18
SPACE END	89.2	2.93E+11	1.50E+19
EARTH END	-90.8	1.97E+11	1.02E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.91E+12	3.42E+20
SIDE DIR	90.0	2.42E+11	1.25E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.06E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 652.1 TO 1008.7 K
 ALTITUDE RANGE: 469.4 TO 480.1 KM

 *DATE: JUNE 1, 1985 DAY OF YEAR: 152 *
 *CUMULATIVE EXPOSURE TIME: 420 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.41E+06	4.23E+14
LONGERON	126.9	2.88E+00	5.33E+09
ROW 2	141.9	5.89E-07	3.11E+04
LONGERON	156.9	9.70E-13	1.14E+00
ROW 3	171.9	4.02E-16	3.26E-03
LONGERON	173.1	2.93E-16	3.19E-03
ROW 4	158.1	3.71E-13	9.52E-01
LONGERON	143.1	1.25E-07	1.92E+04
ROW 5	128.1	4.72E-01	2.53E+09
LONGERON	113.1	6.19E+05	1.93E+14
ROW 6	98.1	1.20E+10	9.25E+17
LONGERON	83.1	7.23E+11	4.30E+19
ROW 7	68.1	2.18E+12	1.29E+20
LONGERON	53.1	3.51E+12	2.07E+20
ROW 8	38.1	4.61E+12	2.72E+20
LONGERON	23.1	5.38E+12	3.18E+20
ROW 9	8.1	5.79E+12	3.42E+20
LONGERON	6.9	5.81E+12	3.43E+20
ROW 10	21.9	5.43E+12	3.20E+20
LONGERON	36.9	4.68E+12	2.76E+20
ROW 11	51.9	3.61E+12	2.13E+20
LONGERON	66.9	2.30E+12	1.35E+20
ROW 12	81.9	8.38E+11	4.96E+19
LONGERON	96.9	2.12E+10	1.50E+18
SPACE END	89.2	2.46E+11	1.51E+19
EARTH END	-90.8	1.64E+11	1.03E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.85E+12	3.45E+20
SIDE DIR	90.0	2.02E+11	1.26E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.67E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 643.0 TO 985.1 K
 ALTITUDE RANGE: 469.9 TO 478.4 KM

 *DATE: JUNE 8, 1985 DAY OF YEAR: 159 *
 *CUMULATIVE EXPOSURE TIME: 427 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.21E+06	4.25E+14
LONGERON	126.9	4.78E+00	5.33E+09
ROW 2	141.9	1.87E-06	3.11E+04
LONGERON	156.9	6.94E-12	1.14E+00
ROW 3	171.9	5.37E-15	3.26E-03
LONGERON	173.0	5.21E-15	3.19E-03
ROW 4	158.1	6.17E-12	9.52E-01
LONGERON	143.1	1.39E-06	1.92E+04
ROW 5	128.1	2.69E+00	2.53E+09
LONGERON	113.1	1.53E+06	1.94E+14
ROW 6	98.1	1.64E+10	9.35E+17
LONGERON	83.1	8.74E+11	4.35E+19
ROW 7	68.1	2.63E+12	1.30E+20
LONGERON	53.1	4.23E+12	2.10E+20
ROW 8	38.1	5.54E+12	2.75E+20
LONGERON	23.1	6.47E+12	3.22E+20
ROW 9	8.1	6.97E+12	3.46E+20
LONGERON	7.0	6.98E+12	3.47E+20
ROW 10	21.9	6.53E+12	3.24E+20
LONGERON	36.9	5.62E+12	2.80E+20
ROW 11	51.9	4.34E+12	2.16E+20
LONGERON	66.9	2.76E+12	1.37E+20
ROW 12	81.9	1.01E+12	5.02E+19
LONGERON	96.9	2.67E+10	1.52E+18
SPACE END	89.2	3.00E+11	1.53E+19
EARTH END	-90.8	2.03E+11	1.05E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.04E+12	3.50E+20
SIDE DIR	90.0	2.49E+11	1.27E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.21E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 664.1 TO 1090.6 K
 ALTITUDE RANGE: 469.5 TO 479.0 KM

 *DATE: JUNE 15, 1985 DAY OF YEAR: 166 *
 *CUMULATIVE EXPOSURE TIME: 434 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.96E+06	4.26E+14
LONGERON	126.9	2.14E+00	5.33E+09
ROW 2	141.9	7.12E-07	3.11E+04
LONGERON	156.9	2.42E-12	1.14E+00
ROW 3	171.9	1.88E-15	3.26E-03
LONGERON	173.0	2.02E-15	3.19E-03
ROW 4	158.1	2.94E-12	9.52E-01
LONGERON	143.1	8.72E-07	1.92E+04
ROW 5	128.1	2.18E+00	2.54E+09
LONGERON	113.1	1.36E+06	1.95E+14
ROW 6	98.1	1.39E+10	9.43E+17
LONGERON	83.1	7.47E+11	4.40E+19
ROW 7	68.1	2.24E+12	1.32E+20
LONGERON	53.1	3.60E+12	2.12E+20
ROW 8	38.1	4.72E+12	2.78E+20
LONGERON	23.1	5.51E+12	3.25E+20
ROW 9	8.1	5.93E+12	3.50E+20
LONGERON	7.0	5.95E+12	3.51E+20
ROW 10	21.9	5.56E+12	3.28E+20
LONGERON	36.9	4.79E+12	2.82E+20
ROW 11	51.9	3.69E+12	2.18E+20
LONGERON	66.9	2.35E+12	1.39E+20
ROW 12	81.9	8.52E+11	5.07E+19
LONGERON	96.9	2.14E+10	1.53E+18
SPACE END	89.2	2.54E+11	1.55E+19
EARTH END	-90.8	1.71E+11	1.06E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	5.99E+12	3.53E+20
SIDE DIR	90.0	2.10E+11	1.29E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.84E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 638.8 TO 1089.8 K
 ALTITUDE RANGE: 469.4 TO 480.2 KM

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*DATE:      JUNE 22, 1985      DAY OF YEAR: 173 *
*CUMULATIVE EXPOSURE TIME: 441 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	8.65E+05	4.27E+14
LONGERON	126.9	4.37E-01	5.33E+09
ROW 2	141.9	5.46E-08	3.11E+04
LONGERON	156.9	8.05E-14	1.14E+00
ROW 3	171.9	4.30E-17	3.26E-03
LONGERON	173.0	5.39E-17	3.19E-03
ROW 4	158.1	1.35E-13	9.52E-01
LONGERON	143.1	8.67E-08	1.92E+04
ROW 5	128.1	4.95E-01	2.54E+09
LONGERON	113.1	5.93E+05	1.95E+14
ROW 6	98.1	8.81E+09	9.49E+17
LONGERON	83.1	5.35E+11	4.43E+19
ROW 7	68.1	1.61E+12	1.33E+20
LONGERON	53.1	2.59E+12	2.14E+20
ROW 8	38.1	3.40E+12	2.80E+20
LONGERON	23.1	3.97E+12	3.27E+20
ROW 9	8.1	4.28E+12	3.52E+20
LONGERON	7.0	4.29E+12	3.53E+20
ROW 10	21.9	4.01E+12	3.30E+20
LONGERON	36.9	3.45E+12	2.85E+20
ROW 11	51.9	2.66E+12	2.20E+20
LONGERON	66.9	1.69E+12	1.40E+20
ROW 12	81.9	6.16E+11	5.11E+19
LONGERON	96.9	1.42E+10	1.54E+18
SPACE END	89.2	1.79E+11	1.56E+19
EARTH END	-90.8	1.19E+11	1.06E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	4.32E+12	3.56E+20
SIDE DIR	90.0	1.47E+11	1.29E+19

AVERAGE ATOMIC OXYGEN DENSITY: 5.66E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 628.8 TO 953.5 K
 ALTITUDE RANGE: 469.4 TO 480.2 KM

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*DATE:      JUNE 29, 1985      DAY OF YEAR: 180 *
*CUMULATIVE EXPOSURE TIME: 448 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.31E+06	4.28E+14
LONGERON	126.9	1.12E+00	5.33E+09
ROW 2	141.9	2.05E-07	3.11E+04
LONGERON	156.9	3.01E-13	1.14E+00
ROW 3	171.9	1.04E-16	3.26E-03
LONGERON	173.1	6.75E-17	3.19E-03
ROW 4	158.1	9.98E-14	9.52E-01
LONGERON	143.1	5.28E-08	1.92E+04
ROW 5	128.1	3.34E-01	2.54E+09
LONGERON	113.1	5.12E+05	1.96E+14
ROW 6	98.1	9.21E+09	9.54E+17
LONGERON	83.1	5.70E+11	4.46E+19
ROW 7	68.1	1.73E+12	1.34E+20
LONGERON	53.1	2.78E+12	2.15E+20
ROW 8	38.1	3.64E+12	2.82E+20
LONGERON	23.1	4.26E+12	3.30E+20
ROW 9	8.1	4.59E+12	3.55E+20
LONGERON	6.9	4.60E+12	3.56E+20
ROW 10	21.9	4.30E+12	3.33E+20
LONGERON	36.9	3.71E+12	2.87E+20
ROW 11	51.9	2.86E+12	2.21E+20
LONGERON	66.9	1.82E+12	1.41E+20
ROW 12	81.9	6.64E+11	5.15E+19
LONGERON	96.9	1.61E+10	1.55E+18
SPACE END	89.2	1.93E+11	1.57E+19
EARTH END	-90.8	1.29E+11	1.07E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	4.63E+12	3.59E+20
SIDE DIR	90.0	1.59E+11	1.30E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.07E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 632.2 TO 970.4 K
 ALTITUDE RANGE: 469.4 TO 479.3 KM

 *DATE: JULY 6, 1985 DAY OF YEAR: 187 *
 *CUMULATIVE EXPOSURE TIME: 455 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.84E+06	4.29E+14
LONGERON	126.9	4.98E+00	5.34E+09
ROW 2	141.9	1.68E-06	3.11E+04
LONGERON	156.9	3.60E-12	1.14E+00
ROW 3	171.8	1.30E-15	3.26E-03
LONGERON	173.1	6.25E-16	3.19E-03
ROW 4	158.1	5.10E-13	9.52E-01
LONGERON	143.1	1.38E-07	1.92E+04
ROW 5	128.1	5.39E-01	2.54E+09
LONGERON	113.1	7.18E+05	1.96E+14
ROW 6	98.1	1.23E+10	9.62E+17
LONGERON	83.1	7.12E+11	4.51E+19
ROW 7	68.1	2.15E+12	1.35E+20
LONGERON	53.1	3.46E+12	2.17E+20
ROW 8	38.1	4.54E+12	2.85E+20
LONGERON	23.1	5.31E+12	3.33E+20
ROW 9	8.2	5.72E+12	3.59E+20
LONGERON	6.9	5.73E+12	3.60E+20
ROW 10	21.9	5.36E+12	3.36E+20
LONGERON	36.9	4.62E+12	2.90E+20
ROW 11	51.9	3.56E+12	2.23E+20
LONGERON	66.9	2.27E+12	1.42E+20
ROW 12	81.9	8.29E+11	5.20E+19
LONGERON	96.9	2.18E+10	1.56E+18
SPACE END	89.2	2.44E+11	1.58E+19
EARTH END	-90.8	1.65E+11	1.08E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.77E+12	3.62E+20
SIDE DIR	90.0	2.02E+11	1.32E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.56E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 646.2 TO 1023.1 K
 ALTITUDE RANGE: 470.1 TO 477.8 KM

 *DATE: JULY 13, 1985 DAY OF YEAR: 194 *
 *CUMULATIVE EXPOSURE TIME: 462 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.41E+06	4.31E+14
LONGERON	126.9	5.92E+00	5.34E+09
ROW 2	141.9	1.85E-06	3.11E+04
LONGERON	156.9	4.09E-12	1.14E+00
ROW 3	171.8	1.78E-15	3.26E-03
LONGERON	173.1	1.06E-15	3.19E-03
ROW 4	158.1	9.45E-13	9.52E-01
LONGERON	143.1	2.24E-07	1.92E+04
ROW 5	128.1	6.91E-01	2.54E+09
LONGERON	113.1	8.29E+05	1.97E+14
ROW 6	98.1	1.37E+10	9.70E+17
LONGERON	83.1	7.69E+11	4.55E+19
ROW 7	68.1	2.32E+12	1.36E+20
LONGERON	53.1	3.73E+12	2.20E+20
ROW 8	38.1	4.89E+12	2.88E+20
LONGERON	23.1	5.72E+12	3.37E+20
ROW 9	8.2	6.16E+12	3.62E+20
LONGERON	6.9	6.17E+12	3.63E+20
ROW 10	21.9	5.77E+12	3.39E+20
LONGERON	36.9	4.97E+12	2.93E+20
ROW 11	51.9	3.84E+12	2.26E+20
LONGERON	66.9	2.44E+12	1.44E+20
ROW 12	81.9	8.92E+11	5.25E+19
LONGERON	96.9	2.39E+10	1.57E+18
SPACE END	89.2	2.65E+11	1.60E+19
EARTH END	-90.8	1.78E+11	1.09E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.22E+12	3.66E+20
SIDE DIR	90.0	2.19E+11	1.33E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.14E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 659.2 TO 1034.3 K
 ALTITUDE RANGE: 469.2 TO 479.5 KM

 *DATE: JULY 20, 1985 DAY OF YEAR: 201 *
 *CUMULATIVE EXPOSURE TIME: 469 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.57E+06	4.32E+14
LONGERON	126.9	1.40E+00	5.34E+09
ROW 2	141.9	2.36E-07	3.11E+04
LONGERON	156.9	3.71E-13	1.14E+00
ROW 3	171.9	1.65E-16	3.26E-03
LONGERON	173.1	1.34E-16	3.19E-03
ROW 4	158.1	1.92E-13	9.52E-01
LONGERON	143.1	7.49E-08	1.92E+04
ROW 5	128.1	3.36E-01	2.54E+09
LONGERON	113.1	4.90E+05	1.97E+14
ROW 6	98.1	9.86E+09	9.76E+17
LONGERON	83.1	6.06E+11	4.59E+19
ROW 7	68.1	1.83E+12	1.38E+20
LONGERON	53.1	2.94E+12	2.21E+20
ROW 8	38.1	3.86E+12	2.90E+20
LONGERON	23.1	4.51E+12	3.39E+20
ROW 9	8.1	4.85E+12	3.65E+20
LONGERON	6.9	4.86E+12	3.66E+20
ROW 10	21.9	4.55E+12	3.42E+20
LONGERON	36.9	3.92E+12	2.95E+20
ROW 11	51.9	3.02E+12	2.28E+20
LONGERON	66.9	1.92E+12	1.45E+20
ROW 12	81.9	7.00E+11	5.29E+19
LONGERON	96.9	1.71E+10	1.59E+18
SPACE END	89.2	2.05E+11	1.61E+19
EARTH END	-90.8	1.37E+11	1.10E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	4.90E+12	3.69E+20
SIDE DIR	90.0	1.69E+11	1.34E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.42E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 631.5 TO 1017.7 K
 ALTITUDE RANGE: 469.2 TO 480.1 KM

 *DATE: JULY 27, 1985 DAY OF YEAR: 208 *
 *CUMULATIVE EXPOSURE TIME: 476 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	7.93E+05	4.33E+14
LONGERON	126.9	3.39E-01	5.34E+09
ROW 2	141.9	3.33E-08	3.11E+04
LONGERON	156.9	4.01E-14	1.14E+00
ROW 3	171.9	1.90E-17	3.26E-03
LONGERON	173.0	2.36E-17	3.19E-03
ROW 4	158.1	6.49E-14	9.52E-01
LONGERON	143.1	4.82E-08	1.92E+04
ROW 5	128.1	3.19E-01	2.54E+09
LONGERON	113.1	4.67E+05	1.97E+14
ROW 6	98.1	8.53E+09	9.81E+17
LONGERON	83.1	5.32E+11	4.62E+19
ROW 7	68.1	1.60E+12	1.39E+20
LONGERON	53.1	2.58E+12	2.23E+20
ROW 8	38.1	3.38E+12	2.92E+20
LONGERON	23.1	3.94E+12	3.42E+20
ROW 9	8.1	4.24E+12	3.68E+20
LONGERON	7.0	4.26E+12	3.69E+20
ROW 10	21.9	3.98E+12	3.45E+20
LONGERON	36.9	3.43E+12	2.97E+20
ROW 11	51.9	2.64E+12	2.29E+20
LONGERON	66.9	1.68E+12	1.46E+20
ROW 12	81.9	6.09E+11	5.33E+19
LONGERON	96.9	1.38E+10	1.59E+18
SPACE END	89.2	1.77E+11	1.62E+19
EARTH END	-90.8	1.18E+11	1.11E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	4.29E+12	3.72E+20
SIDE DIR	90.0	1.46E+11	1.35E+19

AVERAGE ATOMIC OXYGEN DENSITY: 5.61E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 632.6 TO 971.9 K
 ALTITUDE RANGE: 469.2 TO 480.0 KM

 *DATE: AUGUST 3, 1985 DAY OF YEAR: 215 *
 *CUMULATIVE EXPOSURE TIME: 483 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	7.74E+05	4.33E+14
LONGERON	126.9	2.99E-01	5.34E+09
ROW 2	141.9	2.79E-08	3.11E+04
LONGERON	156.9	3.32E-14	1.14E+00
ROW 3	171.9	1.66E-17	3.26E-03
LONGERON	173.0	2.24E-17	3.19E-03
ROW 4	158.1	6.71E-14	9.52E-01
LONGERON	143.1	5.43E-08	1.92E+04
ROW 5	128.1	3.82E-01	2.54E+09
LONGERON	113.1	5.43E+05	1.98E+14
ROW 6	98.1	8.92E+09	9.87E+17
LONGERON	83.1	5.45E+11	4.65E+19
ROW 7	68.1	1.64E+12	1.40E+20
LONGERON	53.1	2.64E+12	2.25E+20
ROW 8	38.1	3.46E+12	2.94E+20
LONGERON	23.1	4.04E+12	3.44E+20
ROW 9	8.1	4.35E+12	3.70E+20
LONGERON	7.0	4.36E+12	3.71E+20
ROW 10	21.9	4.08E+12	3.47E+20
LONGERON	36.9	3.51E+12	2.99E+20
ROW 11	51.9	2.71E+12	2.31E+20
LONGERON	66.9	1.72E+12	1.47E+20
ROW 12	81.9	6.25E+11	5.37E+19
LONGERON	96.9	1.42E+10	1.60E+18
SPACE END	89.2	1.82E+11	1.63E+19
EARTH END	-90.8	1.21E+11	1.12E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	4.40E+12	3.74E+20
SIDE DIR	90.0	1.50E+11	1.36E+19

AVERAGE ATOMIC OXYGEN DENSITY: 5.75E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 639.2 TO 974.1 K
 ALTITUDE RANGE: 469.4 TO 478.5 KM

 *DATE: AUGUST 10, 1985 DAY OF YEAR: 222 *
 *CUMULATIVE EXPOSURE TIME: 490 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	8.18E+05	4.34E+14
LONGERON	126.9	3.39E-01	5.34E+09
ROW 2	141.9	3.12E-08	3.11E+04
LONGERON	156.9	3.30E-14	1.14E+00
ROW 3	171.9	1.31E-17	3.26E-03
LONGERON	173.0	1.37E-17	3.19E-03
ROW 4	158.1	3.55E-14	9.52E-01
LONGERON	143.1	2.96E-08	1.92E+04
ROW 5	128.1	2.52E-01	2.54E+09
LONGERON	113.1	4.53E+05	1.98E+14
ROW 6	98.1	8.62E+09	9.92E+17
LONGERON	83.1	5.46E+11	4.69E+19
ROW 7	68.1	1.65E+12	1.41E+20
LONGERON	53.1	2.66E+12	2.26E+20
ROW 8	38.1	3.48E+12	2.97E+20
LONGERON	23.1	4.07E+12	3.47E+20
ROW 9	8.1	4.38E+12	3.73E+20
LONGERON	7.0	4.39E+12	3.74E+20
ROW 10	21.9	4.10E+12	3.50E+20
LONGERON	36.9	3.54E+12	3.01E+20
ROW 11	51.9	2.73E+12	2.32E+20
LONGERON	66.9	1.74E+12	1.48E+20
ROW 12	81.9	6.32E+11	5.41E+19
LONGERON	96.9	1.45E+10	1.61E+18
SPACE END	89.2	1.83E+11	1.64E+19
EARTH END	-90.8	1.22E+11	1.12E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	4.42E+12	3.77E+20
SIDE DIR	90.0	1.50E+11	1.37E+19

AVERAGE ATOMIC OXYGEN DENSITY: 5.79E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 633.0 TO 946.5 K
 ALTITUDE RANGE: 469.4 TO 478.2 KM

 *DATE: AUGUST 17, 1985 DAY OF YEAR: 229 *
 *CUMULATIVE EXPOSURE TIME: 497 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	9.14E+05	4.34E+14
LONGERON	126.9	5.15E-01	5.34E+09
ROW 2	141.9	5.30E-08	3.11E+04
LONGERON	156.9	4.38E-14	1.14E+00
ROW 3	171.8	1.02E-17	3.26E-03
LONGERON	173.1	6.11E-18	3.19E-03
ROW 4	158.1	1.11E-14	9.52E-01
LONGERON	143.1	9.15E-09	1.92E+04
ROW 5	128.1	1.04E-01	2.54E+09
LONGERON	113.1	2.97E+05	1.98E+14
ROW 6	98.1	8.05E+09	9.97E+17
LONGERON	83.1	5.41E+11	4.72E+19
ROW 7	68.1	1.64E+12	1.42E+20
LONGERON	53.1	2.64E+12	2.28E+20
ROW 8	38.1	3.46E+12	2.99E+20
LONGERON	23.1	4.05E+12	3.49E+20
ROW 9	8.2	4.36E+12	3.76E+20
LONGERON	6.9	4.37E+12	3.77E+20
ROW 10	21.9	4.09E+12	3.52E+20
LONGERON	36.9	3.52E+12	3.03E+20
ROW 11	51.9	2.72E+12	2.34E+20
LONGERON	66.9	1.73E+12	1.49E+20
ROW 12	81.9	6.30E+11	5.45E+19
LONGERON	96.9	1.43E+10	1.62E+18
SPACE END	89.2	1.81E+11	1.65E+19
EARTH END	-90.8	1.20E+11	1.13E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	4.40E+12	3.80E+20
SIDE DIR	90.0	1.49E+11	1.38E+19

AVERAGE ATOMIC OXYGEN DENSITY: 5.77E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 629.1 TO 929.1 K
 ALTITUDE RANGE: 469.1 TO 479.8 KM

 *DATE: AUGUST 24, 1985 DAY OF YEAR: 236 *
 *CUMULATIVE EXPOSURE TIME: 504 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.54E+06	4.35E+14
LONGERON	126.9	1.26E+00	5.34E+09
ROW 2	141.9	1.54E-07	3.11E+04
LONGERON	156.9	1.26E-13	1.14E+00
ROW 3	171.8	2.46E-17	3.26E-03
LONGERON	173.1	1.08E-17	3.19E-03
ROW 4	158.1	1.39E-14	9.52E-01
LONGERON	143.1	8.64E-09	1.92E+04
ROW 5	128.1	9.19E-02	2.54E+09
LONGERON	113.1	3.16E+05	1.98E+14
ROW 6	98.1	9.64E+09	1.00E+18
LONGERON	83.1	6.32E+11	4.76E+19
ROW 7	68.1	1.91E+12	1.43E+20
LONGERON	53.1	3.08E+12	2.30E+20
ROW 8	38.1	4.04E+12	3.01E+20
LONGERON	23.1	4.72E+12	3.52E+20
ROW 9	8.2	5.08E+12	3.79E+20
LONGERON	6.9	5.09E+12	3.80E+20
ROW 10	21.9	4.76E+12	3.55E+20
LONGERON	36.9	4.10E+12	3.06E+20
ROW 11	51.9	3.17E+12	2.36E+20
LONGERON	66.9	2.01E+12	1.50E+20
ROW 12	81.9	7.35E+11	5.49E+19
LONGERON	96.9	1.75E+10	1.63E+18
SPACE END	89.2	2.13E+11	1.67E+19
EARTH END	-90.8	1.41E+11	1.14E+19
	CONSTANT INCIDENCE ANGLE (DEGREES)		
RAM DIR	0.0	5.13E+12	3.83E+20
SIDE DIR	90.0	1.75E+11	1.39E+19
AVERAGE ATOMIC OXYGEN DENSITY:		6.72E+06 ATOMS/CM**3	
TEMPERATURE RANGE:		632.7 TO 946.8 K	
ALTITUDE RANGE:		469.1 TO 480.0 KM	

 *DATE: AUGUST 31, 1985 DAY OF YEAR: 243 *
 *CUMULATIVE EXPOSURE TIME: 511 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.58E+06	4.36E+14
LONGERON	126.9	1.10E+00	5.34E+09
ROW 2	141.9	1.15E-07	3.11E+04
LONGERON	156.9	9.59E-14	1.14E+00
ROW 3	171.9	2.38E-17	3.26E-03
LONGERON	173.1	1.45E-17	3.19E-03
ROW 4	158.1	2.31E-14	9.52E-01
LONGERON	143.1	1.42E-08	1.92E+04
ROW 5	128.1	1.24E-01	2.54E+09
LONGERON	113.1	3.59E+05	1.98E+14
ROW 6	98.1	1.04E+10	1.01E+18
LONGERON	83.1	6.75E+11	4.80E+19
ROW 7	68.1	2.04E+12	1.44E+20
LONGERON	53.1	3.28E+12	2.32E+20
ROW 8	38.1	4.30E+12	3.04E+20
LONGERON	23.1	5.03E+12	3.55E+20
ROW 9	8.1	5.42E+12	3.82E+20
LONGERON	6.9	5.43E+12	3.83E+20
ROW 10	21.9	5.08E+12	3.58E+20
LONGERON	36.9	4.38E+12	3.09E+20
ROW 11	51.9	3.38E+12	2.38E+20
LONGERON	66.9	2.15E+12	1.51E+20
ROW 12	81.9	7.82E+11	5.54E+19
LONGERON	96.9	1.86E+10	1.64E+18
SPACE END	89.2	2.27E+11	1.68E+19
EARTH END	-90.8	1.51E+11	1.15E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.47E+12	3.86E+20
SIDE DIR	90.0	1.87E+11	1.40E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.17E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 638.6 TO 950.6 K
 ALTITUDE RANGE: 469.0 TO 479.4 KM

 *DATE: SEPTEMBER 7, 1985 DAY OF YEAR: 250 *
 *CUMULATIVE EXPOSURE TIME: 518 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	8.10E+05	4.37E+14
LONGERON	126.9	2.80E-01	5.34E+09
ROW 2	141.9	1.77E-08	3.11E+04
LONGERON	156.9	1.36E-14	1.14E+00
ROW 3	171.9	4.56E-18	3.26E-03
LONGERON	173.0	4.69E-18	3.19E-03
ROW 4	158.1	1.30E-14	9.52E-01
LONGERON	143.1	1.21E-08	1.92E+04
ROW 5	128.1	1.20E-01	2.54E+09
LONGERON	113.1	3.05E+05	1.99E+14
ROW 6	98.1	8.72E+09	1.01E+18
LONGERON	83.1	5.94E+11	4.84E+19
ROW 7	68.1	1.79E+12	1.45E+20
LONGERON	53.1	2.89E+12	2.33E+20
ROW 8	38.1	3.79E+12	3.06E+20
LONGERON	23.1	4.42E+12	3.58E+20
ROW 9	8.1	4.76E+12	3.85E+20
LONGERON	7.0	4.78E+12	3.86E+20
ROW 10	21.9	4.46E+12	3.61E+20
LONGERON	36.9	3.85E+12	3.11E+20
ROW 11	51.9	2.97E+12	2.40E+20
LONGERON	66.9	1.89E+12	1.53E+20
ROW 12	81.9	6.86E+11	5.58E+19
LONGERON	96.9	1.51E+10	1.65E+18
SPACE END	89.2	1.97E+11	1.69E+19
EARTH END	-90.8	1.30E+11	1.16E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	4.81E+12	3.89E+20
SIDE DIR	90.0	1.62E+11	1.41E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.30E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 630.1 TO 924.1 K
 ALTITUDE RANGE: 469.7 TO 477.6 KM

 *DATE: SEPTEMBER 14, 1985 DAY OF YEAR: 257 *
 *CUMULATIVE EXPOSURE TIME: 525 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	7.86E+05	4.37E+14
LONGERON	126.9	2.28E-01	5.34E+09
ROW 2	141.9	1.49E-08	3.11E+04
LONGERON	156.9	1.29E-14	1.14E+00
ROW 3	171.9	5.49E-18	3.26E-03
LONGERON	173.0	7.71E-18	3.19E-03
ROW 4	158.1	2.79E-14	9.52E-01
LONGERON	143.1	2.91E-08	1.92E+04
ROW 5	128.1	2.65E-01	2.54E+09
LONGERON	113.1	4.90E+05	1.99E+14
ROW 6	98.1	1.00E+10	1.02E+18
LONGERON	83.1	6.45E+11	4.87E+19
ROW 7	68.1	1.95E+12	1.46E+20
LONGERON	53.1	3.13E+12	2.35E+20
ROW 8	38.1	4.11E+12	3.08E+20
LONGERON	23.1	4.80E+12	3.60E+20
ROW 9	8.1	5.16E+12	3.88E+20
LONGERON	7.0	5.18E+12	3.89E+20
ROW 10	21.9	4.84E+12	3.64E+20
LONGERON	36.9	4.17E+12	3.13E+20
ROW 11	51.9	3.22E+12	2.42E+20
LONGERON	66.9	2.04E+12	1.54E+20
ROW 12	81.9	7.43E+11	5.62E+19
LONGERON	96.9	1.65E+10	1.66E+18
SPACE END	89.2	2.15E+11	1.71E+19
EARTH END	-90.8	1.43E+11	1.16E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.22E+12	3.92E+20
SIDE DIR	90.0	1.76E+11	1.42E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.83E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 634.8 TO 943.3 K
 ALTITUDE RANGE: 469.0 TO 478.8 KM

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*DATE:  SEPTEMBER  21, 1985          DAY OF YEAR:  264 *
*CUMULATIVE EXPOSURE TIME:  532  DAYS          *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.12E+06	4.38E+14
LONGERON	126.9	4.43E-01	5.35E+09
ROW 2	141.9	4.08E-08	3.11E+04
LONGERON	156.9	4.21E-14	1.14E+00
ROW 3	171.9	1.68E-17	3.26E-03
LONGERON	173.0	1.98E-17	3.19E-03
ROW 4	158.1	6.01E-14	9.52E-01
LONGERON	143.1	5.40E-08	1.92E+04
ROW 5	128.1	4.37E-01	2.54E+09
LONGERON	113.1	7.06E+05	1.99E+14
ROW 6	98.1	1.22E+10	1.03E+18
LONGERON	83.1	7.43E+11	4.92E+19
ROW 7	68.1	2.24E+12	1.48E+20
LONGERON	53.1	3.61E+12	2.37E+20
ROW 8	38.1	4.73E+12	3.11E+20
LONGERON	23.1	5.53E+12	3.64E+20
ROW 9	8.1	5.95E+12	3.92E+20
LONGERON	7.0	5.97E+12	3.93E+20
ROW 10	21.9	5.58E+12	3.67E+20
LONGERON	36.9	4.80E+12	3.16E+20
ROW 11	51.9	3.71E+12	2.44E+20
LONGERON	66.9	2.36E+12	1.55E+20
ROW 12	81.9	8.57E+11	5.68E+19
LONGERON	96.9	1.98E+10	1.67E+18
SPACE END	89.2	2.49E+11	1.72E+19
EARTH END	-90.8	1.66E+11	1.17E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.01E+12	3.96E+20
SIDE DIR	90.0	2.05E+11	1.43E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.87E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 653.3 TO 957.8 K
 ALTITUDE RANGE: 468.9 TO 479.7 KM

 *DATE: SEPTEMBER 28, 1985 DAY OF YEAR: 271 *
 *CUMULATIVE EXPOSURE TIME: 539 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	9.73E+05	4.39E+14
LONGERON	126.9	3.45E-01	5.35E+09
ROW 2	141.9	2.79E-08	3.11E+04
LONGERON	156.9	2.75E-14	1.14E+00
ROW 3	171.9	1.05E-17	3.26E-03
LONGERON	173.1	1.11E-17	3.19E-03
ROW 4	158.1	3.00E-14	9.52E-01
LONGERON	143.1	2.65E-08	1.92E+04
ROW 5	128.1	2.42E-01	2.54E+09
LONGERON	113.1	5.01E+05	2.00E+14
ROW 6	98.1	1.10E+10	1.03E+18
LONGERON	83.1	7.14E+11	4.96E+19
ROW 7	68.1	2.16E+12	1.49E+20
LONGERON	53.1	3.48E+12	2.40E+20
ROW 8	38.1	4.56E+12	3.14E+20
LONGERON	23.1	5.33E+12	3.67E+20
ROW 9	8.1	5.73E+12	3.95E+20
LONGERON	6.9	5.75E+12	3.96E+20
ROW 10	21.9	5.37E+12	3.70E+20
LONGERON	36.9	4.63E+12	3.19E+20
ROW 11	51.9	3.57E+12	2.46E+20
LONGERON	66.9	2.27E+12	1.57E+20
ROW 12	81.9	8.28E+11	5.73E+19
LONGERON	96.9	1.87E+10	1.68E+18

SPACE END	89.2	2.38E+11	1.74E+19
EARTH END	-90.8	1.59E+11	1.18E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.79E+12	3.99E+20
SIDE DIR	90.0	1.96E+11	1.44E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.59E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 643.4 TO 946.9 K
 ALTITUDE RANGE: 468.9 TO 479.7 KM

 *DATE: OCTOBER 5, 1985 DAY OF YEAR: 278 *
 *CUMULATIVE EXPOSURE TIME: 546 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.12E+06	4.40E+14
LONGERON	126.9	1.85E+00	5.35E+09
ROW 2	141.9	3.00E-07	3.11E+04
LONGERON	156.9	3.61E-13	1.14E+00
ROW 3	171.8	1.05E-16	3.26E-03
LONGERON	173.1	6.39E-17	3.19E-03
ROW 4	158.1	9.35E-14	9.52E-01
LONGERON	143.1	4.95E-08	1.92E+04
ROW 5	128.1	3.36E-01	2.54E+09
LONGERON	113.1	6.53E+05	2.00E+14
ROW 6	98.1	1.42E+10	1.04E+18
LONGERON	83.1	8.76E+11	5.02E+19
ROW 7	68.1	2.64E+12	1.50E+20
LONGERON	53.1	4.26E+12	2.42E+20
ROW 8	38.1	5.58E+12	3.17E+20
LONGERON	23.1	6.52E+12	3.71E+20
ROW 9	8.2	7.02E+12	3.99E+20
LONGERON	6.9	7.04E+12	4.00E+20
ROW 10	21.9	6.58E+12	3.74E+20
LONGERON	36.9	5.67E+12	3.23E+20
ROW 11	51.9	4.38E+12	2.49E+20
LONGERON	66.9	2.78E+12	1.58E+20
ROW 12	81.9	1.01E+12	5.79E+19
LONGERON	96.9	2.46E+10	1.70E+18
SPACE END	89.2	2.96E+11	1.75E+19
EARTH END	-90.8	1.98E+11	1.20E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	7.09E+12	4.03E+20
SIDE DIR	90.0	2.44E+11	1.46E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.29E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 652.4 TO 992.4 K
 ALTITUDE RANGE: 468.9 TO 478.6 KM

 *DATE: OCTOBER 12, 1985 DAY OF YEAR: 285 *
 *CUMULATIVE EXPOSURE TIME: 553 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.93E+06	4.42E+14
LONGERON	126.9	3.22E+00	5.35E+09
ROW 2	141.9	5.45E-07	3.11E+04
LONGERON	156.9	5.87E-13	1.14E+00
ROW 3	171.8	1.41E-16	3.26E-03
LONGERON	173.1	7.19E-17	3.19E-03
ROW 4	158.1	9.44E-14	9.52E-01
LONGERON	143.1	4.69E-08	1.92E+04
ROW 5	128.1	3.07E-01	2.54E+09
LONGERON	113.1	6.51E+05	2.00E+14
ROW 6	98.1	1.54E+10	1.05E+18
LONGERON	83.1	9.48E+11	5.07E+19
ROW 7	68.1	2.86E+12	1.52E+20
LONGERON	53.1	4.61E+12	2.45E+20
ROW 8	38.1	6.04E+12	3.21E+20
LONGERON	23.1	7.06E+12	3.75E+20
ROW 9	8.2	7.60E+12	4.04E+20
LONGERON	6.9	7.62E+12	4.05E+20
ROW 10	21.9	7.13E+12	3.79E+20
LONGERON	36.9	6.14E+12	3.26E+20
ROW 11	51.9	4.74E+12	2.52E+20
LONGERON	66.9	3.01E+12	1.60E+20
ROW 12	81.9	1.10E+12	5.85E+19
LONGERON	96.9	2.74E+10	1.72E+18
SPACE END	89.2	3.22E+11	1.77E+19
EARTH END	-90.8	2.15E+11	1.21E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	7.68E+12	4.08E+20
SIDE DIR	90.0	2.65E+11	1.47E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.01E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 660.5 TO 987.8 K
 ALTITUDE RANGE: 469.3 TO 477.5 KM

 *DATE: OCTOBER 19, 1985 DAY OF YEAR: 292 *
 *CUMULATIVE EXPOSURE TIME: 560 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.97E+06	4.43E+14
LONGERON	126.9	3.31E+00	5.35E+09
ROW 2	141.9	6.78E-07	3.11E+04
LONGERON	156.9	1.09E-12	1.14E+00
ROW 3	171.9	4.22E-16	3.26E-03
LONGERON	173.1	2.79E-16	3.19E-03
ROW 4	158.1	3.33E-13	9.52E-01
LONGERON	143.1	1.15E-07	1.92E+04
ROW 5	128.1	4.94E-01	2.54E+09
LONGERON	113.1	7.69E+05	2.01E+14
ROW 6	98.1	1.63E+10	1.06E+18
LONGERON	83.1	9.84E+11	5.13E+19
ROW 7	68.1	2.97E+12	1.54E+20
LONGERON	53.1	4.78E+12	2.48E+20
ROW 8	38.1	6.27E+12	3.25E+20
LONGERON	23.1	7.32E+12	3.80E+20
ROW 9	8.1	7.88E+12	4.09E+20
LONGERON	6.9	7.91E+12	4.10E+20
ROW 10	21.9	7.39E+12	3.83E+20
LONGERON	36.9	6.37E+12	3.30E+20
ROW 11	51.9	4.91E+12	2.55E+20
LONGERON	66.9	3.13E+12	1.62E+20
ROW 12	81.9	1.14E+12	5.92E+19
LONGERON	96.9	2.85E+10	1.73E+18
SPACE END	89.2	3.34E+11	1.79E+19
EARTH END	-90.8	2.24E+11	1.22E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.97E+12	4.13E+20
SIDE DIR	90.0	2.75E+11	1.49E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.04E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 665.6 TO 1008.2 K
 ALTITUDE RANGE: 468.7 TO 479.2 KM

 *DATE: OCTOBER 26, 1985 DAY OF YEAR: 299 *
 *CUMULATIVE EXPOSURE TIME: 567 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.38E+06	4.45E+14
LONGERON	126.9	2.24E+00	5.35E+09
ROW 2	141.9	4.86E-07	3.11E+04
LONGERON	156.9	9.54E-13	1.14E+00
ROW 3	171.9	4.67E-16	3.26E-03
LONGERON	173.0	3.93E-16	3.19E-03
ROW 4	158.1	5.84E-13	9.52E-01
LONGERON	143.1	2.29E-07	1.92E+04
ROW 5	128.1	8.90E-01	2.54E+09
LONGERON	113.1	9.69E+05	2.02E+14
ROW 6	98.1	1.60E+10	1.07E+18
LONGERON	83.1	9.56E+11	5.19E+19
ROW 7	68.1	2.88E+12	1.56E+20
LONGERON	53.1	4.64E+12	2.51E+20
ROW 8	38.1	6.08E+12	3.29E+20
LONGERON	23.1	7.11E+12	3.84E+20
ROW 9	8.1	7.65E+12	4.13E+20
LONGERON	7.0	7.67E+12	4.14E+20
ROW 10	21.9	7.17E+12	3.87E+20
LONGERON	36.9	6.18E+12	3.34E+20
ROW 11	51.9	4.77E+12	2.58E+20
LONGERON	66.9	3.03E+12	1.64E+20
ROW 12	81.9	1.10E+12	5.99E+19
LONGERON	96.9	2.71E+10	1.75E+18
SPACE END	89.2	3.24E+11	1.81E+19
EARTH END	-90.8	2.17E+11	1.24E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	7.73E+12	4.18E+20
SIDE DIR	90.0	2.67E+11	1.51E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.01E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 676.6 TO 1002.7 K
 ALTITUDE RANGE: 468.8 TO 479.5 KM

 *DATE: NOVEMBER 2, 1985 DAY OF YEAR: 306 *
 *CUMULATIVE EXPOSURE TIME: 574 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.86E+06	4.46E+14
LONGERON	126.9	1.58E+00	5.35E+09
ROW 2	141.9	3.73E-07	3.11E+04
LONGERON	156.9	7.75E-13	1.14E+00
ROW 3	171.9	3.70E-16	3.26E-03
LONGERON	173.0	3.14E-16	3.19E-03
ROW 4	158.1	5.34E-13	9.52E-01
LONGERON	143.1	2.49E-07	1.92E+04
ROW 5	128.1	1.05E+00	2.54E+09
LONGERON	113.1	1.03E+06	2.02E+14
ROW 6	98.1	1.48E+10	1.08E+18
LONGERON	83.1	8.80E+11	5.24E+19
ROW 7	68.1	2.66E+12	1.57E+20
LONGERON	53.1	4.28E+12	2.53E+20
ROW 8	38.1	5.61E+12	3.32E+20
LONGERON	23.1	6.55E+12	3.88E+20
ROW 9	8.1	7.05E+12	4.18E+20
LONGERON	7.0	7.07E+12	4.19E+20
ROW 10	21.9	6.61E+12	3.91E+20
LONGERON	36.9	5.70E+12	3.37E+20
ROW 11	51.9	4.40E+12	2.60E+20
LONGERON	66.9	2.80E+12	1.65E+20
ROW 12	81.9	1.02E+12	6.05E+19
LONGERON	96.9	2.47E+10	1.76E+18
SPACE END	89.2	2.97E+11	1.83E+19
EARTH END	-90.8	1.99E+11	1.25E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.13E+12	4.22E+20
SIDE DIR	90.0	2.45E+11	1.52E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.34E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 668.0 TO 1011.6 K
 ALTITUDE RANGE: 468.6 TO 479.3 KM

 *DATE: NOVEMBER 9, 1985 DAY OF YEAR: 313 *
 *CUMULATIVE EXPOSURE TIME: 581 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.55E+06	4.47E+14
LONGERON	126.9	1.09E+00	5.35E+09
ROW 2	141.9	2.36E-07	3.11E+04
LONGERON	156.9	4.93E-13	1.14E+00
ROW 3	171.9	2.63E-16	3.26E-03
LONGERON	173.0	2.69E-16	3.19E-03
ROW 4	158.1	5.17E-13	9.52E-01
LONGERON	143.1	2.48E-07	1.92E+04
ROW 5	128.1	1.04E+00	2.54E+09
LONGERON	113.1	1.01E+06	2.03E+14
ROW 6	98.1	1.41E+10	1.09E+18
LONGERON	83.1	8.42E+11	5.29E+19
ROW 7	68.1	2.54E+12	1.59E+20
LONGERON	53.1	4.09E+12	2.56E+20
ROW 8	38.1	5.35E+12	3.35E+20
LONGERON	23.1	6.26E+12	3.92E+20
ROW 9	8.1	6.73E+12	4.22E+20
LONGERON	7.0	6.75E+12	4.23E+20
ROW 10	21.9	6.31E+12	3.95E+20
LONGERON	36.9	5.44E+12	3.41E+20
ROW 11	51.9	4.20E+12	2.63E+20
LONGERON	66.9	2.67E+12	1.67E+20
ROW 12	81.9	9.71E+11	6.11E+19
LONGERON	96.9	2.30E+10	1.78E+18
SPACE END	89.2	2.83E+11	1.85E+19
EARTH END	-90.8	1.90E+11	1.26E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	6.80E+12	4.26E+20
SIDE DIR	90.0	2.33E+11	1.54E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.91E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 663.4 TO 1010.4 K
 ALTITUDE RANGE: 469.0 TO 477.5 KM

 *DATE: NOVEMBER 16, 1985 DAY OF YEAR: 320 *
 *CUMULATIVE EXPOSURE TIME: 588 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.35E+06	4.48E+14
LONGERON	126.9	2.56E+00	5.35E+09
ROW 2	141.9	8.59E-07	3.11E+04
LONGERON	156.9	2.91E-12	1.14E+00
ROW 3	171.9	2.16E-15	3.26E-03
LONGERON	173.1	2.12E-15	3.19E-03
ROW 4	158.1	2.69E-12	9.52E-01
LONGERON	143.1	7.22E-07	1.92E+04
ROW 5	128.1	1.81E+00	2.54E+09
LONGERON	113.1	1.31E+06	2.04E+14
ROW 6	98.1	1.65E+10	1.10E+18
LONGERON	83.1	9.41E+11	5.35E+19
ROW 7	68.1	2.83E+12	1.61E+20
LONGERON	53.1	4.56E+12	2.58E+20
ROW 8	38.1	5.97E+12	3.39E+20
LONGERON	23.1	6.98E+12	3.96E+20
ROW 9	8.1	7.51E+12	4.26E+20
LONGERON	6.9	7.53E+12	4.27E+20
ROW 10	21.9	7.04E+12	3.99E+20
LONGERON	36.9	6.07E+12	3.44E+20
ROW 11	51.9	4.68E+12	2.66E+20
LONGERON	66.9	2.98E+12	1.69E+20
ROW 12	81.9	1.08E+12	6.18E+19
LONGERON	96.9	2.68E+10	1.79E+18
SPACE END	89.2	3.19E+11	1.87E+19
EARTH END	-90.8	2.14E+11	1.27E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.59E+12	4.31E+20
SIDE DIR	90.0	2.64E+11	1.55E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.94E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 664.1 TO 1047.7 K
 ALTITUDE RANGE: 468.6 TO 478.0 KM

 *DATE: NOVEMBER 23, 1985 DAY OF YEAR: 327 *
 *CUMULATIVE EXPOSURE TIME: 595 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.75E+06	4.50E+14
LONGERON	126.9	3.71E+00	5.36E+09
ROW 2	141.9	1.01E-06	3.11E+04
LONGERON	156.9	2.38E-12	1.14E+00
ROW 3	171.8	1.29E-15	3.26E-03
LONGERON	173.1	1.03E-15	3.19E-03
ROW 4	158.1	1.19E-12	9.52E-01
LONGERON	143.1	3.27E-07	1.92E+04
ROW 5	128.1	9.34E-01	2.54E+09
LONGERON	113.1	8.81E+05	2.04E+14
ROW 6	98.1	1.46E+10	1.11E+18
LONGERON	83.1	8.70E+11	5.40E+19
ROW 7	68.1	2.62E+12	1.62E+20
LONGERON	53.1	4.22E+12	2.61E+20
ROW 8	38.1	5.54E+12	3.42E+20
LONGERON	23.1	6.47E+12	4.00E+20
ROW 9	8.2	6.97E+12	4.30E+20
LONGERON	6.9	6.99E+12	4.32E+20
ROW 10	21.9	6.53E+12	4.03E+20
LONGERON	36.9	5.63E+12	3.48E+20
ROW 11	51.9	4.34E+12	2.68E+20
LONGERON	66.9	2.76E+12	1.71E+20
ROW 12	81.9	1.01E+12	6.24E+19
LONGERON	96.9	2.51E+10	1.81E+18
SPACE END	89.2	2.95E+11	1.88E+19
EARTH END	-90.8	1.97E+11	1.28E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	7.04E+12	4.35E+20
SIDE DIR	90.0	2.43E+11	1.57E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.22E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 646.9 TO 1045.9 K
 ALTITUDE RANGE: 468.5 TO 479.3 KM

 *DATE: NOVEMBER 30, 1985 DAY OF YEAR: 334 *
 *CUMULATIVE EXPOSURE TIME: 602 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.28E+06	4.53E+14
LONGERON	126.9	1.02E+01	5.36E+09
ROW 2	141.9	5.46E-06	3.11E+04
LONGERON	156.9	2.32E-11	1.14E+00
ROW 3	171.8	1.78E-14	3.26E-03
LONGERON	173.1	1.39E-14	3.19E-03
ROW 4	158.1	1.05E-11	9.52E-01
LONGERON	143.1	1.38E-06	1.92E+04
ROW 5	128.1	1.84E+00	2.54E+09
LONGERON	113.1	1.09E+06	2.05E+14
ROW 6	98.1	1.61E+10	1.12E+18
LONGERON	83.1	9.30E+11	5.46E+19
ROW 7	68.1	2.80E+12	1.64E+20
LONGERON	53.1	4.51E+12	2.64E+20
ROW 8	38.1	5.92E+12	3.46E+20
LONGERON	23.1	6.92E+12	4.04E+20
ROW 9	8.2	7.44E+12	4.35E+20
LONGERON	6.9	7.47E+12	4.36E+20
ROW 10	21.9	6.98E+12	4.08E+20
LONGERON	36.9	6.01E+12	3.51E+20
ROW 11	51.9	4.64E+12	2.71E+20
LONGERON	66.9	2.95E+12	1.72E+20
ROW 12	81.9	1.08E+12	6.30E+19
LONGERON	96.9	2.82E+10	1.83E+18
SPACE END	89.2	3.18E+11	1.90E+19
EARTH END	-90.8	2.13E+11	1.30E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	7.52E+12	4.39E+20
SIDE DIR	90.0	2.62E+11	1.58E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.86E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 645.3 TO 1075.7 K
 ALTITUDE RANGE: 468.4 TO 479.4 KM

 *DATE: DECEMBER 7, 1985 DAY OF YEAR: 341 *
 *CUMULATIVE EXPOSURE TIME: 609 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.37E+06	4.55E+14
LONGERON	126.9	7.50E+00	5.37E+09
ROW 2	141.9	4.30E-06	3.11E+04
LONGERON	156.9	2.02E-11	1.14E+00
ROW 3	171.9	1.61E-14	3.26E-03
LONGERON	173.0	1.21E-14	3.19E-03
ROW 4	158.1	8.72E-12	9.52E-01
LONGERON	143.1	1.14E-06	1.92E+04
ROW 5	128.1	1.60E+00	2.54E+09
LONGERON	113.1	1.00E+06	2.05E+14
ROW 6	98.1	1.44E+10	1.13E+18
LONGERON	83.1	8.42E+11	5.51E+19
ROW 7	68.1	2.54E+12	1.65E+20
LONGERON	53.1	4.08E+12	2.66E+20
ROW 8	38.1	5.35E+12	3.49E+20
LONGERON	23.1	6.25E+12	4.08E+20
ROW 9	8.1	6.73E+12	4.39E+20
LONGERON	7.0	6.75E+12	4.40E+20
ROW 10	21.9	6.31E+12	4.11E+20
LONGERON	36.9	5.44E+12	3.55E+20
ROW 11	51.9	4.20E+12	2.74E+20
LONGERON	66.9	2.67E+12	1.74E+20
ROW 12	81.9	9.72E+11	6.36E+19
LONGERON	96.9	2.49E+10	1.84E+18
SPACE END	89.2	2.87E+11	1.92E+19
EARTH END	-90.8	1.92E+11	1.31E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.80E+12	4.44E+20
SIDE DIR	90.0	2.36E+11	1.60E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.91E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 639.0 TO 1074.4 K
 ALTITUDE RANGE: 468.4 TO 478.6 KM

 *DATE: DECEMBER 14, 1985 DAY OF YEAR: 348 *
 *CUMULATIVE EXPOSURE TIME: 616 DAYS *

AVERAGES AND RANGES ARE BASED ON 1775 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.45E+06	4.56E+14
LONGERON	126.9	4.66E+00	5.37E+09
ROW 2	141.9	2.27E-06	3.11E+04
LONGERON	156.9	8.38E-12	1.14E+00
ROW 3	171.9	5.13E-15	3.26E-03
LONGERON	173.1	3.40E-15	3.19E-03
ROW 4	158.1	2.85E-12	9.52E-01
LONGERON	143.1	5.80E-07	1.92E+04
ROW 5	128.1	1.33E+00	2.55E+09
LONGERON	113.1	9.54E+05	2.06E+14
ROW 6	98.1	1.22E+10	1.13E+18
LONGERON	83.1	7.23E+11	5.55E+19
ROW 7	68.1	2.19E+12	1.67E+20
LONGERON	53.1	3.52E+12	2.68E+20
ROW 8	38.1	4.62E+12	3.52E+20
LONGERON	23.1	5.40E+12	4.11E+20
ROW 9	8.1	5.82E+12	4.42E+20
LONGERON	6.9	5.83E+12	4.44E+20
ROW 10	21.9	5.45E+12	4.15E+20
LONGERON	36.9	4.70E+12	3.57E+20
ROW 11	51.9	3.63E+12	2.76E+20
LONGERON	66.9	2.31E+12	1.75E+20
ROW 12	81.9	8.44E+11	6.41E+19
LONGERON	96.9	2.13E+10	1.85E+18
SPACE END	89.2	2.46E+11	1.94E+19
EARTH END	-90.8	1.65E+11	1.32E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.88E+12	4.47E+20
SIDE DIR	90.0	2.03E+11	1.61E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.71E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 638.7 TO 1061.2 K
 ALTITUDE RANGE: 469.2 TO 477.3 KM

 *DATE: DECEMBER 21, 1985 DAY OF YEAR: 355 *
 *CUMULATIVE EXPOSURE TIME: 623 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.19E+06	4.57E+14
LONGERON	126.9	3.99E+00	5.37E+09
ROW 2	141.9	2.06E-06	3.11E+04
LONGERON	156.9	7.91E-12	1.14E+00
ROW 3	171.9	5.02E-15	3.26E-03
LONGERON	173.0	3.62E-15	3.19E-03
ROW 4	158.1	3.55E-12	9.52E-01
LONGERON	143.1	8.35E-07	1.92E+04
ROW 5	128.1	1.93E+00	2.55E+09
LONGERON	113.1	1.21E+06	2.07E+14
ROW 6	98.1	1.28E+10	1.14E+18
LONGERON	83.1	7.26E+11	5.60E+19
ROW 7	68.1	2.19E+12	1.68E+20
LONGERON	53.1	3.52E+12	2.70E+20
ROW 8	38.1	4.62E+12	3.55E+20
LONGERON	23.1	5.40E+12	4.14E+20
ROW 9	8.1	5.81E+12	4.46E+20
LONGERON	7.0	5.83E+12	4.47E+20
ROW 10	21.9	5.45E+12	4.18E+20
LONGERON	36.9	4.70E+12	3.60E+20
ROW 11	51.9	3.62E+12	2.78E+20
LONGERON	66.9	2.30E+12	1.77E+20
ROW 12	81.9	8.41E+11	6.46E+19
LONGERON	96.9	2.10E+10	1.87E+18

SPACE END	89.2	2.47E+11	1.95E+19
EARTH END	-90.8	1.66E+11	1.33E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.87E+12	4.51E+20
SIDE DIR	90.0	2.04E+11	1.62E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.70E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 629.6 TO 1057.1 K
 ALTITUDE RANGE: 468.9 TO 478.1 KM

 *DATE: DECEMBER 28, 1985 DAY OF YEAR: 362 *
 *CUMULATIVE EXPOSURE TIME: 630 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.94E+06	4.59E+14
LONGERON	126.9	2.90E+00	5.37E+09
ROW 2	141.9	1.34E-06	3.11E+04
LONGERON	156.9	5.27E-12	1.14E+00
ROW 3	171.9	3.96E-15	3.26E-03
LONGERON	173.1	3.69E-15	3.19E-03
ROW 4	158.1	4.35E-12	9.52E-01
LONGERON	143.1	1.03E-06	1.92E+04
ROW 5	128.1	2.16E+00	2.55E+09
LONGERON	113.1	1.24E+06	2.07E+14
ROW 6	98.1	1.30E+10	1.15E+18
LONGERON	83.1	7.30E+11	5.64E+19
ROW 7	68.1	2.20E+12	1.69E+20
LONGERON	53.1	3.53E+12	2.73E+20
ROW 8	38.1	4.63E+12	3.57E+20
LONGERON	23.1	5.41E+12	4.18E+20
ROW 9	8.1	5.82E+12	4.50E+20
LONGERON	6.9	5.84E+12	4.51E+20
ROW 10	21.9	5.45E+12	4.21E+20
LONGERON	36.9	4.70E+12	3.63E+20
ROW 11	51.9	3.63E+12	2.80E+20
LONGERON	66.9	2.30E+12	1.78E+20
ROW 12	81.9	8.39E+11	6.51E+19
LONGERON	96.9	2.06E+10	1.88E+18
SPACE END	89.2	2.47E+11	1.97E+19
EARTH END	-90.8	1.66E+11	1.34E+19
	CONSTANT INCIDENCE ANGLE (DEGREES)		
RAM DIR	0.0	5.88E+12	4.54E+20
SIDE DIR	90.0	2.04E+11	1.63E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.71E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 618.4 TO 1057.9 K
 ALTITUDE RANGE: 468.9 TO 478.2 KM

 *DATE: JANUARY 4, 1986 DAY OF YEAR: 4 *
 *CUMULATIVE EXPOSURE TIME: 637 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.35E+06	4.60E+14
LONGERON	126.9	3.66E+00	5.38E+09
ROW 2	141.9	1.70E-06	3.11E+04
LONGERON	156.9	7.34E-12	1.14E+00
ROW 3	171.8	6.08E-15	3.26E-03
LONGERON	173.1	5.72E-15	3.19E-03
ROW 4	158.1	6.11E-12	9.52E-01
LONGERON	143.1	1.23E-06	1.92E+04
ROW 5	128.1	2.19E+00	2.55E+09
LONGERON	113.1	1.19E+06	2.08E+14
ROW 6	98.1	1.35E+10	1.16E+18
LONGERON	83.1	7.62E+11	5.69E+19
ROW 7	68.1	2.29E+12	1.71E+20
LONGERON	53.1	3.69E+12	2.75E+20
ROW 8	38.1	4.83E+12	3.60E+20
LONGERON	23.1	5.65E+12	4.21E+20
ROW 9	8.2	6.08E+12	4.53E+20
LONGERON	6.9	6.10E+12	4.54E+20
ROW 10	21.9	5.70E+12	4.25E+20
LONGERON	36.9	4.91E+12	3.66E+20
ROW 11	51.9	3.79E+12	2.82E+20
LONGERON	66.9	2.41E+12	1.80E+20
ROW 12	81.9	8.77E+11	6.57E+19
LONGERON	96.9	2.20E+10	1.89E+18
SPACE END	89.2	2.59E+11	1.98E+19
EARTH END	-90.8	1.74E+11	1.35E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.14E+12	4.58E+20
SIDE DIR	90.0	2.14E+11	1.65E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.05E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 615.7 TO 1060.4 K
 ALTITUDE RANGE: 468.8 TO 478.1 KM

 *DATE: JANUARY 11, 1986 DAY OF YEAR: 11 *
 *CUMULATIVE EXPOSURE TIME: 644 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.73E+06	4.62E+14
LONGERON	126.9	4.63E+00	5.38E+09
ROW 2	141.9	1.58E-06	3.11E+04
LONGERON	156.9	4.34E-12	1.14E+00
ROW 3	171.8	2.51E-15	3.26E-03
LONGERON	173.1	1.97E-15	3.19E-03
ROW 4	158.1	2.07E-12	9.52E-01
LONGERON	143.1	4.67E-07	1.92E+04
ROW 5	128.1	1.03E+00	2.55E+09
LONGERON	113.1	7.86E+05	2.09E+14
ROW 6	98.1	1.22E+10	1.16E+18
LONGERON	83.1	7.22E+11	5.73E+19
ROW 7	68.1	2.18E+12	1.72E+20
LONGERON	53.1	3.51E+12	2.77E+20
ROW 8	38.1	4.60E+12	3.63E+20
LONGERON	23.1	5.37E+12	4.24E+20
ROW 9	8.2	5.78E+12	4.57E+20
LONGERON	6.9	5.80E+12	4.58E+20
ROW 10	21.9	5.42E+12	4.28E+20
LONGERON	36.9	4.67E+12	3.69E+20
ROW 11	51.9	3.60E+12	2.85E+20
LONGERON	66.9	2.29E+12	1.81E+20
ROW 12	81.9	8.35E+11	6.62E+19
LONGERON	96.9	2.11E+10	1.91E+18
SPACE END	89.2	2.45E+11	2.00E+19
EARTH END	-90.8	1.64E+11	1.36E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.84E+12	4.61E+20
SIDE DIR	90.0	2.02E+11	1.66E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.65E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 620.7 TO 1052.0 K
 ALTITUDE RANGE: 469.0 TO 477.3 KM

 *DATE: JANUARY 18, 1986 DAY OF YEAR: 18 *
 *CUMULATIVE EXPOSURE TIME: 651 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.41E+06	4.63E+14
LONGERON	126.9	3.80E+00	5.38E+09
ROW 2	141.9	1.17E-06	3.11E+04
LONGERON	156.9	2.80E-12	1.14E+00
ROW 3	171.9	1.41E-15	3.26E-03
LONGERON	173.1	9.77E-16	3.19E-03
ROW 4	158.1	9.55E-13	9.52E-01
LONGERON	143.1	2.23E-07	1.92E+04
ROW 5	128.1	5.88E-01	2.55E+09
LONGERON	113.1	5.88E+05	2.09E+14
ROW 6	98.1	1.10E+10	1.17E+18
LONGERON	83.1	6.80E+11	5.77E+19
ROW 7	68.1	2.05E+12	1.73E+20
LONGERON	53.1	3.30E+12	2.79E+20
ROW 8	38.1	4.33E+12	3.66E+20
LONGERON	23.1	5.06E+12	4.27E+20
ROW 9	8.1	5.45E+12	4.60E+20
LONGERON	6.9	5.46E+12	4.61E+20
ROW 10	21.9	5.11E+12	4.31E+20
LONGERON	36.9	4.40E+12	3.72E+20
ROW 11	51.9	3.40E+12	2.87E+20
LONGERON	66.9	2.16E+12	1.82E+20
ROW 12	81.9	7.87E+11	6.66E+19
LONGERON	96.9	1.95E+10	1.92E+18

SPACE END	89.2	2.30E+11	2.01E+19
EARTH END	-90.8	1.54E+11	1.37E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	5.50E+12	4.65E+20
SIDE DIR	90.0	1.89E+11	1.67E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.21E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 622.0 TO 1030.4 K
 ALTITUDE RANGE: 468.8 TO 477.4 KM

 *DATE: JANUARY 25, 1986 DAY OF YEAR: 25 *
 *CUMULATIVE EXPOSURE TIME: 658 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.82E+06	4.65E+14
LONGERON	126.9	6.19E+00	5.39E+09
ROW 2	141.9	3.65E-06	3.11E+04
LONGERON	156.9	1.68E-11	1.14E+00
ROW 3	171.9	1.23E-14	3.26E-03
LONGERON	173.0	8.38E-15	3.19E-03
ROW 4	158.1	5.86E-12	9.52E-01
LONGERON	143.1	8.35E-07	1.92E+04
ROW 5	128.1	1.38E+00	2.55E+09
LONGERON	113.1	9.24E+05	2.10E+14
ROW 6	98.1	1.27E+10	1.18E+18
LONGERON	83.1	7.47E+11	5.82E+19
ROW 7	68.1	2.25E+12	1.75E+20
LONGERON	53.1	3.63E+12	2.81E+20
ROW 8	38.1	4.76E+12	3.69E+20
LONGERON	23.1	5.56E+12	4.31E+20
ROW 9	8.1	5.98E+12	4.64E+20
LONGERON	7.0	6.00E+12	4.65E+20
ROW 10	21.9	5.61E+12	4.34E+20
LONGERON	36.9	4.83E+12	3.74E+20
ROW 11	51.9	3.73E+12	2.89E+20
LONGERON	66.9	2.37E+12	1.84E+20
ROW 12	81.9	8.66E+11	6.72E+19
LONGERON	96.9	2.21E+10	1.93E+18
SPACE END	89.2	2.54E+11	2.03E+19
EARTH END	-90.8	1.71E+11	1.38E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.05E+12	4.68E+20
SIDE DIR	90.0	2.10E+11	1.68E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.93E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 632.2 TO 1065.7 K
 ALTITUDE RANGE: 468.7 TO 478.0 KM

 *DATE: FEBRUARY 1, 1986 DAY OF YEAR: 32 *
 *CUMULATIVE EXPOSURE TIME: 665 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.03E+06	4.66E+14
LONGERON	126.9	3.16E+00	5.39E+09
ROW 2	141.9	1.40E-06	3.11E+04
LONGERON	156.9	4.96E-12	1.14E+00
ROW 3	171.9	3.04E-15	3.26E-03
LONGERON	173.0	2.09E-15	3.19E-03
ROW 4	158.1	1.93E-12	9.52E-01
LONGERON	143.1	4.65E-07	1.92E+04
ROW 5	128.1	1.25E+00	2.55E+09
LONGERON	113.1	9.59E+05	2.10E+14
ROW 6	98.1	1.21E+10	1.19E+18
LONGERON	83.1	7.13E+11	5.86E+19
ROW 7	68.1	2.16E+12	1.76E+20
LONGERON	53.1	3.47E+12	2.83E+20
ROW 8	38.1	4.55E+12	3.71E+20
LONGERON	23.1	5.32E+12	4.34E+20
ROW 9	8.1	5.72E+12	4.67E+20
LONGERON	7.0	5.74E+12	4.68E+20
ROW 10	21.9	5.37E+12	4.38E+20
LONGERON	36.9	4.63E+12	3.77E+20
ROW 11	51.9	3.57E+12	2.91E+20
LONGERON	66.9	2.27E+12	1.85E+20
ROW 12	81.9	8.29E+11	6.77E+19
LONGERON	96.9	2.05E+10	1.94E+18
SPACE END	89.2	2.42E+11	2.04E+19
EARTH END	-90.8	1.62E+11	1.39E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.78E+12	4.72E+20
SIDE DIR	90.0	2.00E+11	1.69E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.58E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 639.5 TO 1056.2 K
 ALTITUDE RANGE: 468.6 TO 478.0 KM

 *DATE: FEBRUARY 8, 1986 DAY OF YEAR: 39 *
 *CUMULATIVE EXPOSURE TIME: 672 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	6.43E+06	4.70E+14
LONGERON	126.9	2.84E+01	5.41E+09
ROW 2	141.9	4.84E-05	3.12E+04
LONGERON	156.9	5.66E-10	1.14E+00
ROW 3	171.9	6.93E-13	3.26E-03
LONGERON	173.0	4.90E-13	3.19E-03
ROW 4	158.1	2.40E-10	9.52E-01
LONGERON	143.1	1.88E-05	1.93E+04
ROW 5	128.1	1.41E+01	2.56E+09
LONGERON	113.1	3.73E+06	2.12E+14
ROW 6	98.1	2.38E+10	1.20E+18
LONGERON	83.1	1.14E+12	5.93E+19
ROW 7	68.1	3.42E+12	1.78E+20
LONGERON	53.1	5.50E+12	2.87E+20
ROW 8	38.1	7.21E+12	3.76E+20
LONGERON	23.1	8.42E+12	4.39E+20
ROW 9	8.1	9.07E+12	4.73E+20
LONGERON	7.0	9.09E+12	4.74E+20
ROW 10	21.9	8.50E+12	4.43E+20
LONGERON	36.9	7.32E+12	3.82E+20
ROW 11	51.9	5.65E+12	2.95E+20
LONGERON	66.9	3.59E+12	1.87E+20
ROW 12	81.9	1.31E+12	6.85E+19
LONGERON	96.9	3.74E+10	1.97E+18
SPACE END	89.2	3.97E+11	2.06E+19
EARTH END	-90.8	2.71E+11	1.40E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	9.16E+12	4.77E+20
SIDE DIR	90.0	3.30E+11	1.71E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.20E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 660.2 TO 1164.0 K
 ALTITUDE RANGE: 468.6 TO 477.6 KM

 *DATE: FEBRUARY 15, 1986 DAY OF YEAR: 46 *
 *CUMULATIVE EXPOSURE TIME: 679 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.45E+06	4.73E+14
LONGERON	126.9	1.17E+01	5.41E+09
ROW 2	141.9	1.29E-05	3.12E+04
LONGERON	156.9	1.19E-10	1.14E+00
ROW 3	171.9	1.35E-13	3.26E-03
LONGERON	173.1	1.05E-13	3.19E-03
ROW 4	158.1	6.39E-11	9.52E-01
LONGERON	143.1	6.61E-06	1.93E+04
ROW 5	128.1	6.65E+00	2.56E+09
LONGERON	113.1	2.43E+06	2.14E+14
ROW 6	98.1	2.06E+10	1.21E+18
LONGERON	83.1	1.06E+12	5.99E+19
ROW 7	68.1	3.18E+12	1.80E+20
LONGERON	53.1	5.12E+12	2.90E+20
ROW 8	38.1	6.71E+12	3.80E+20
LONGERON	23.1	7.85E+12	4.44E+20
ROW 9	8.1	8.45E+12	4.78E+20
LONGERON	6.9	8.47E+12	4.79E+20
ROW 10	21.9	7.91E+12	4.48E+20
LONGERON	36.9	6.82E+12	3.86E+20
ROW 11	51.9	5.26E+12	2.98E+20
LONGERON	66.9	3.35E+12	1.89E+20
ROW 12	81.9	1.22E+12	6.92E+19
LONGERON	96.9	3.32E+10	1.99E+18
SPACE END	89.2	3.66E+11	2.09E+19
EARTH END	-90.8	2.48E+11	1.42E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	8.53E+12	4.83E+20
SIDE DIR	90.0	3.03E+11	1.73E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.12E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 664.2 TO 1142.2 K
 ALTITUDE RANGE: 468.8 TO 476.7 KM

 *DATE: FEBRUARY 22, 1986 DAY OF YEAR: 53 *
 *CUMULATIVE EXPOSURE TIME: 686 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.38E+06	4.74E+14
LONGERON	126.9	2.70E+00	5.41E+09
ROW 2	141.9	6.16E-07	3.12E+04
LONGERON	156.9	1.15E-12	1.14E+00
ROW 3	171.8	5.17E-16	3.26E-03
LONGERON	173.1	3.90E-16	3.19E-03
ROW 4	158.1	5.09E-13	9.52E-01
LONGERON	143.1	1.77E-07	1.93E+04
ROW 5	128.1	6.64E-01	2.56E+09
LONGERON	113.1	7.82E+05	2.14E+14
ROW 6	98.1	1.41E+10	1.22E+18
LONGERON	83.1	8.44E+11	6.05E+19
ROW 7	68.1	2.55E+12	1.81E+20
LONGERON	53.1	4.10E+12	2.92E+20
ROW 8	38.1	5.37E+12	3.83E+20
LONGERON	23.1	6.28E+12	4.48E+20
ROW 9	8.2	6.76E+12	4.82E+20
LONGERON	6.9	6.78E+12	4.83E+20
ROW 10	21.9	6.33E+12	4.51E+20
LONGERON	36.9	5.46E+12	3.89E+20
ROW 11	51.9	4.21E+12	3.00E+20
LONGERON	66.9	2.68E+12	1.91E+20
ROW 12	81.9	9.76E+11	6.98E+19
LONGERON	96.9	2.41E+10	2.00E+18
SPACE END	89.2	2.86E+11	2.10E+19
EARTH END	-90.8	1.91E+11	1.43E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.83E+12	4.87E+20
SIDE DIR	90.0	2.36E+11	1.75E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.94E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 655.8 TO 1016.8 K
 ALTITUDE RANGE: 468.3 TO 477.5 KM

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*DATE:      MARCH  1, 1986      DAY OF YEAR:  60 *
*CUMULATIVE EXPOSURE TIME:  693 DAYS      *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.27E+06	4.77E+14
LONGERON	126.9	7.49E+00	5.42E+09
ROW 2	141.9	2.32E-06	3.12E+04
LONGERON	156.9	4.70E-12	1.14E+00
ROW 3	171.8	1.88E-15	3.26E-03
LONGERON	173.1	1.18E-15	3.19E-03
ROW 4	158.1	1.22E-12	9.52E-01
LONGERON	143.1	3.20E-07	1.93E+04
ROW 5	128.1	9.25E-01	2.57E+09
LONGERON	113.1	1.01E+06	2.15E+14
ROW 6	98.1	1.77E+10	1.23E+18
LONGERON	83.1	1.02E+12	6.11E+19
ROW 7	68.1	3.07E+12	1.83E+20
LONGERON	53.1	4.95E+12	2.95E+20
ROW 8	38.1	6.48E+12	3.87E+20
LONGERON	23.1	7.58E+12	4.52E+20
ROW 9	8.2	8.16E+12	4.87E+20
LONGERON	6.9	8.18E+12	4.88E+20
ROW 10	21.9	7.65E+12	4.56E+20
LONGERON	36.9	6.59E+12	3.93E+20
ROW 11	51.9	5.09E+12	3.03E+20
LONGERON	66.9	3.23E+12	1.93E+20
ROW 12	81.9	1.18E+12	7.05E+19
LONGERON	96.9	3.11E+10	2.02E+18
SPACE END	89.2	3.49E+11	2.13E+19
EARTH END	-90.8	2.35E+11	1.45E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	8.24E+12	4.92E+20
SIDE DIR	90.0	2.88E+11	1.76E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.08E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 672.8 TO 1023.9 K
 ALTITUDE RANGE: 468.3 TO 477.8 KM

 *DATE: MARCH 8, 1986 DAY OF YEAR: 67 *
 *CUMULATIVE EXPOSURE TIME: 700 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.92E+06	4.79E+14
LONGERON	126.9	5.70E+00	5.42E+09
ROW 2	141.9	1.69E-06	3.12E+04
LONGERON	156.9	3.83E-12	1.14E+00
ROW 3	171.9	1.80E-15	3.26E-03
LONGERON	173.1	1.24E-15	3.19E-03
ROW 4	158.1	1.34E-12	9.52E-01
LONGERON	143.1	3.64E-07	1.93E+04
ROW 5	128.1	1.10E+00	2.57E+09
LONGERON	113.1	1.16E+06	2.16E+14
ROW 6	98.1	1.88E+10	1.24E+18
LONGERON	83.1	1.07E+12	6.17E+19
ROW 7	68.1	3.21E+12	1.85E+20
LONGERON	53.1	5.17E+12	2.98E+20
ROW 8	38.1	6.78E+12	3.91E+20
LONGERON	23.1	7.93E+12	4.57E+20
ROW 9	8.1	8.53E+12	4.92E+20
LONGERON	6.9	8.56E+12	4.93E+20
ROW 10	21.9	8.00E+12	4.61E+20
LONGERON	36.9	6.89E+12	3.97E+20
ROW 11	51.9	5.32E+12	3.07E+20
LONGERON	66.9	3.38E+12	1.95E+20
ROW 12	81.9	1.23E+12	7.12E+19
LONGERON	96.9	3.23E+10	2.04E+18
SPACE END	89.2	3.66E+11	2.15E+19
EARTH END	-90.8	2.46E+11	1.46E+19
CONSTANT INCIDENCE ANGLE (DEGREES)			
RAM DIR	0.0	8.62E+12	4.97E+20
SIDE DIR	90.0	3.02E+11	1.78E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.13E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 688.1 TO 1023.2 K
 ALTITUDE RANGE: 468.2 TO 477.7 KM

 *DATE: MARCH 15, 1986 DAY OF YEAR: 74 *
 *CUMULATIVE EXPOSURE TIME: 707 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.77E+06	4.80E+14
LONGERON	126.9	1.13E+00	5.42E+09
ROW 2	141.9	1.81E-07	3.12E+04
LONGERON	156.9	3.19E-13	1.14E+00
ROW 3	171.9	1.66E-16	3.26E-03
LONGERON	173.0	1.66E-16	3.19E-03
ROW 4	158.1	3.12E-13	9.52E-01
LONGERON	143.1	1.53E-07	1.93E+04
ROW 5	128.1	7.15E-01	2.57E+09
LONGERON	113.1	8.59E+05	2.16E+14
ROW 6	98.1	1.46E+10	1.25E+18
LONGERON	83.1	8.83E+11	6.23E+19
ROW 7	68.1	2.66E+12	1.87E+20
LONGERON	53.1	4.29E+12	3.01E+20
ROW 8	38.1	5.62E+12	3.94E+20
LONGERON	23.1	6.56E+12	4.61E+20
ROW 9	8.1	7.06E+12	4.96E+20
LONGERON	7.0	7.08E+12	4.97E+20
ROW 10	21.9	6.62E+12	4.65E+20
LONGERON	36.9	5.71E+12	4.01E+20
ROW 11	51.9	4.40E+12	3.09E+20
LONGERON	66.9	2.80E+12	1.97E+20
ROW 12	81.9	1.02E+12	7.19E+19
LONGERON	96.9	2.45E+10	2.05E+18
SPACE END	89.2	2.98E+11	2.17E+19
EARTH END	-90.8	1.99E+11	1.47E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.14E+12	5.01E+20
SIDE DIR	90.0	2.45E+11	1.80E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.35E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 662.3 TO 999.1 K
 ALTITUDE RANGE: 468.2 TO 476.9 KM

 *DATE: MARCH 22, 1986 DAY OF YEAR: 81 *
 *CUMULATIVE EXPOSURE TIME: 714 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.33E+06	4.81E+14
LONGERON	126.9	5.31E-01	5.42E+09
ROW 2	141.9	5.37E-08	3.12E+04
LONGERON	156.9	7.00E-14	1.14E+00
ROW 3	171.9	3.79E-17	3.26E-03
LONGERON	173.0	5.45E-17	3.19E-03
ROW 4	158.1	1.63E-13	9.52E-01
LONGERON	143.1	1.20E-07	1.93E+04
ROW 5	128.1	7.13E-01	2.57E+09
LONGERON	113.1	8.86E+05	2.17E+14
ROW 6	98.1	1.39E+10	1.26E+18
LONGERON	83.1	8.40E+11	6.28E+19
ROW 7	68.1	2.53E+12	1.88E+20
LONGERON	53.1	4.08E+12	3.03E+20
ROW 8	38.1	5.34E+12	3.98E+20
LONGERON	23.1	6.25E+12	4.65E+20
ROW 9	8.1	6.72E+12	5.00E+20
LONGERON	7.0	6.74E+12	5.02E+20
ROW 10	21.9	6.30E+12	4.69E+20
LONGERON	36.9	5.43E+12	4.04E+20
ROW 11	51.9	4.19E+12	3.12E+20
LONGERON	66.9	2.66E+12	1.98E+20
ROW 12	81.9	9.69E+11	7.24E+19
LONGERON	96.9	2.27E+10	2.07E+18
SPACE END	89.2	2.82E+11	2.18E+19
EARTH END	-90.8	1.89E+11	1.48E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.79E+12	5.05E+20
SIDE DIR	90.0	2.32E+11	1.81E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.90E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 664.4 TO 966.1 K
 ALTITUDE RANGE: 468.3 TO 476.6 KM

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*DATE:      MARCH 29, 1986      DAY OF YEAR:  88 *
*CUMULATIVE EXPOSURE TIME:  721 DAYS      *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.37E+06	4.82E+14
LONGERON	126.9	5.81E-01	5.42E+09
ROW 2	141.9	6.21E-08	3.12E+04
LONGERON	156.9	8.57E-14	1.14E+00
ROW 3	171.9	4.41E-17	3.26E-03
LONGERON	173.1	5.34E-17	3.19E-03
ROW 4	158.1	1.34E-13	9.52E-01
LONGERON	143.1	9.10E-08	1.93E+04
ROW 5	128.1	5.70E-01	2.57E+09
LONGERON	113.1	8.05E+05	2.17E+14
ROW 6	98.1	1.38E+10	1.27E+18
LONGERON	83.1	8.41E+11	6.33E+19
ROW 7	68.1	2.54E+12	1.90E+20
LONGERON	53.1	4.09E+12	3.06E+20
ROW 8	38.1	5.36E+12	4.01E+20
LONGERON	23.1	6.27E+12	4.69E+20
ROW 9	8.1	6.74E+12	5.04E+20
LONGERON	6.9	6.76E+12	5.06E+20
ROW 10	21.9	6.32E+12	4.73E+20
LONGERON	36.9	5.45E+12	4.07E+20
ROW 11	51.9	4.20E+12	3.14E+20
LONGERON	66.9	2.67E+12	2.00E+20
ROW 12	81.9	9.74E+11	7.30E+19
LONGERON	96.9	2.29E+10	2.08E+18
SPACE END	89.2	2.83E+11	2.20E+19
EARTH END	-90.8	1.89E+11	1.50E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.81E+12	5.09E+20
SIDE DIR	90.0	2.33E+11	1.83E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.92E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 662.7 TO 959.5 K
 ALTITUDE RANGE: 468.0 TO 477.3 KM

 *DATE: APRIL 5, 1986 DAY OF YEAR: 95 *
 *CUMULATIVE EXPOSURE TIME: 728 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.59E+06	4.83E+14
LONGERON	126.9	1.21E+00	5.42E+09
ROW 2	141.9	1.78E-07	3.12E+04
LONGERON	156.9	2.01E-13	1.14E+00
ROW 3	171.8	5.66E-17	3.26E-03
LONGERON	173.1	3.47E-17	3.19E-03
ROW 4	158.1	5.38E-14	9.52E-01
LONGERON	143.1	3.12E-08	1.93E+04
ROW 5	128.1	2.34E-01	2.57E+09
LONGERON	113.1	5.07E+05	2.17E+14
ROW 6	98.1	1.23E+10	1.28E+18
LONGERON	83.1	7.95E+11	6.38E+19
ROW 7	68.1	2.41E+12	1.91E+20
LONGERON	53.1	3.87E+12	3.08E+20
ROW 8	38.1	5.08E+12	4.04E+20
LONGERON	23.1	5.94E+12	4.72E+20
ROW 9	8.2	6.39E+12	5.08E+20
LONGERON	6.9	6.41E+12	5.10E+20
ROW 10	21.9	5.99E+12	4.76E+20
LONGERON	36.9	5.16E+12	4.10E+20
ROW 11	51.9	3.98E+12	3.17E+20
LONGERON	66.9	2.53E+12	2.01E+20
ROW 12	81.9	9.24E+11	7.36E+19
LONGERON	96.9	2.16E+10	2.09E+18
SPACE END	89.2	2.67E+11	2.22E+19
EARTH END	-90.8	1.78E+11	1.51E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	6.46E+12	5.13E+20
SIDE DIR	90.0	2.20E+11	1.84E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.46E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 655.7 TO 916.0 K
 ALTITUDE RANGE: 468.0 TO 477.4 KM

 *DATE: APRIL 12, 1986 DAY OF YEAR: 102 *
 *CUMULATIVE EXPOSURE TIME: 735 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.79E+06	4.84E+14
LONGERON	126.9	3.50E+00	5.43E+09
ROW 2	141.9	6.95E-07	3.12E+04
LONGERON	156.9	8.42E-13	1.14E+00
ROW 3	171.8	2.00E-16	3.26E-03
LONGERON	173.1	8.36E-17	3.19E-03
ROW 4	158.1	8.03E-14	9.52E-01
LONGERON	143.1	3.20E-08	1.93E+04
ROW 5	128.1	2.15E-01	2.57E+09
LONGERON	113.1	5.51E+05	2.18E+14
ROW 6	98.1	1.43E+10	1.29E+18
LONGERON	83.1	8.95E+11	6.43E+19
ROW 7	68.1	2.71E+12	1.93E+20
LONGERON	53.1	4.36E+12	3.11E+20
ROW 8	38.1	5.71E+12	4.07E+20
LONGERON	23.1	6.68E+12	4.76E+20
ROW 9	8.2	7.19E+12	5.12E+20
LONGERON	6.9	7.21E+12	5.14E+20
ROW 10	21.9	6.74E+12	4.80E+20
LONGERON	36.9	5.81E+12	4.14E+20
ROW 11	51.9	4.48E+12	3.19E+20
LONGERON	66.9	2.85E+12	2.03E+20
ROW 12	81.9	1.04E+12	7.42E+19
LONGERON	96.9	2.57E+10	2.11E+18

SPACE END	89.2	3.03E+11	2.23E+19
EARTH END	-90.8	2.02E+11	1.52E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.26E+12	5.18E+20
SIDE DIR	90.0	2.50E+11	1.85E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.51E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 658.1 TO 947.1 K
 ALTITUDE RANGE: 468.0 TO 477.2 KM

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*DATE:      APRIL 19, 1986      DAY OF YEAR: 109 *
*CUMULATIVE EXPOSURE TIME: 742 DAYS
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.79E+06	4.86E+14
LONGERON	126.9	2.98E+00	5.43E+09
ROW 2	141.9	5.27E-07	3.12E+04
LONGERON	156.9	7.04E-13	1.14E+00
ROW 3	171.9	2.36E-16	3.26E-03
LONGERON	173.1	1.53E-16	3.19E-03
ROW 4	158.1	1.96E-13	9.52E-01
LONGERON	143.1	7.66E-08	1.93E+04
ROW 5	128.1	3.73E-01	2.57E+09
LONGERON	113.1	6.67E+05	2.18E+14
ROW 6	98.1	1.50E+10	1.29E+18
LONGERON	83.1	9.19E+11	6.49E+19
ROW 7	68.1	2.77E+12	1.95E+20
LONGERON	53.1	4.47E+12	3.13E+20
ROW 8	38.1	5.86E+12	4.11E+20
LONGERON	23.1	6.85E+12	4.80E+20
ROW 9	8.1	7.37E+12	5.17E+20
LONGERON	6.9	7.39E+12	5.18E+20
ROW 10	21.9	6.91E+12	4.84E+20
LONGERON	36.9	5.95E+12	4.18E+20
ROW 11	51.9	4.59E+12	3.22E+20
LONGERON	66.9	2.92E+12	2.05E+20
ROW 12	81.9	1.07E+12	7.49E+19
LONGERON	96.9	2.65E+10	2.13E+18
SPACE END	89.2	3.12E+11	2.25E+19
EARTH END	-90.8	2.08E+11	1.53E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.44E+12	5.22E+20
SIDE DIR	90.0	2.57E+11	1.87E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.75E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 665.8 TO 956.1 K
 ALTITUDE RANGE: 468.2 TO 476.3 KM

 *DATE: APRIL 26, 1986 DAY OF YEAR: 116 *
 *CUMULATIVE EXPOSURE TIME: 749 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.96E+06	4.87E+14
LONGERON	126.9	1.37E+00	5.43E+09
ROW 2	141.9	2.09E-07	3.12E+04
LONGERON	156.9	3.69E-13	1.14E+00
ROW 3	171.9	2.15E-16	3.26E-03
LONGERON	173.0	2.45E-16	3.19E-03
ROW 4	158.1	4.75E-13	9.52E-01
LONGERON	143.1	2.11E-07	1.93E+04
ROW 5	128.1	8.36E-01	2.57E+09
LONGERON	113.1	8.89E+05	2.19E+14
ROW 6	98.1	1.46E+10	1.30E+18
LONGERON	83.1	8.73E+11	6.54E+19
ROW 7	68.1	2.63E+12	1.96E+20
LONGERON	53.1	4.23E+12	3.16E+20
ROW 8	38.1	5.55E+12	4.14E+20
LONGERON	23.1	6.48E+12	4.84E+20
ROW 9	8.1	6.98E+12	5.21E+20
LONGERON	7.0	6.99E+12	5.23E+20
ROW 10	21.9	6.54E+12	4.88E+20
LONGERON	36.9	5.63E+12	4.21E+20
ROW 11	51.9	4.35E+12	3.25E+20
LONGERON	66.9	2.76E+12	2.07E+20
ROW 12	81.9	1.01E+12	7.55E+19
LONGERON	96.9	2.44E+10	2.14E+18
SPACE END	89.2	2.95E+11	2.27E+19
EARTH END	-90.8	1.97E+11	1.54E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.05E+12	5.27E+20
SIDE DIR	90.0	2.43E+11	1.88E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.23E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 668.2 TO 980.7 K
 ALTITUDE RANGE: 467.9 TO 476.6 KM

 *DATE: MAY 3, 1986 DAY OF YEAR: 123 *
 *CUMULATIVE EXPOSURE TIME: 756 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.63E+06	4.89E+14
LONGERON	126.9	2.66E+00	5.43E+09
ROW 2	141.9	7.29E-07	3.12E+04
LONGERON	156.9	1.94E-12	1.14E+00
ROW 3	171.9	1.22E-15	3.26E-03
LONGERON	173.0	1.21E-15	3.19E-03
ROW 4	158.1	1.91E-12	9.52E-01
LONGERON	143.1	6.95E-07	1.93E+04
ROW 5	128.1	2.19E+00	2.57E+09
LONGERON	113.1	1.63E+06	2.20E+14
ROW 6	98.1	1.80E+10	1.31E+18
LONGERON	83.1	9.74E+11	6.60E+19
ROW 7	68.1	2.92E+12	1.98E+20
LONGERON	53.1	4.70E+12	3.19E+20
ROW 8	38.1	6.16E+12	4.18E+20
LONGERON	23.1	7.20E+12	4.89E+20
ROW 9	8.1	7.75E+12	5.26E+20
LONGERON	7.0	7.77E+12	5.27E+20
ROW 10	21.9	7.26E+12	4.93E+20
LONGERON	36.9	6.26E+12	4.25E+20
ROW 11	51.9	4.83E+12	3.28E+20
LONGERON	66.9	3.07E+12	2.08E+20
ROW 12	81.9	1.12E+12	7.61E+19
LONGERON	96.9	2.84E+10	2.16E+18
SPACE END	89.2	3.32E+11	2.29E+19
EARTH END	-90.8	2.24E+11	1.56E+19
	CONSTANT INCIDENCE ANGLE (DEGREES)		
RAM DIR	0.0	7.83E+12	5.31E+20
SIDE DIR	90.0	2.74E+11	1.90E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.02E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 674.8 TO 1067.4 K
 ALTITUDE RANGE: 467.8 TO 477.1 KM

 *DATE: MAY 10, 1986 DAY OF YEAR: 130 *
 *CUMULATIVE EXPOSURE TIME: 763 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.75E+06	4.90E+14
LONGERON	126.9	1.32E+00	5.43E+09
ROW 2	141.9	2.69E-07	3.12E+04
LONGERON	156.9	5.77E-13	1.14E+00
ROW 3	171.9	3.27E-16	3.26E-03
LONGERON	173.0	3.19E-16	3.19E-03
ROW 4	158.1	5.42E-13	9.52E-01
LONGERON	143.1	2.43E-07	1.93E+04
ROW 5	128.1	1.05E+00	2.57E+09
LONGERON	113.1	1.05E+06	2.20E+14
ROW 6	98.1	1.39E+10	1.32E+18
LONGERON	83.1	8.00E+11	6.65E+19
ROW 7	68.1	2.41E+12	2.00E+20
LONGERON	53.1	3.88E+12	3.21E+20
ROW 8	38.1	5.08E+12	4.21E+20
LONGERON	23.1	5.94E+12	4.92E+20
ROW 9	8.1	6.40E+12	5.30E+20
LONGERON	7.0	6.41E+12	5.31E+20
ROW 10	21.9	5.99E+12	4.96E+20
LONGERON	36.9	5.17E+12	4.28E+20
ROW 11	51.9	3.99E+12	3.30E+20
LONGERON	66.9	2.53E+12	2.10E+20
ROW 12	81.9	9.23E+11	7.67E+19
LONGERON	96.9	2.26E+10	2.17E+18
SPACE END	89.2	2.71E+11	2.31E+19
EARTH END	-90.8	1.82E+11	1.57E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.46E+12	5.35E+20
SIDE DIR	90.0	2.23E+11	1.91E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.46E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 643.6 TO 1056.3 K
 ALTITUDE RANGE: 467.7 TO 477.1 KM

 *DATE: MAY 17, 1986 DAY OF YEAR: 137 *
 *CUMULATIVE EXPOSURE TIME: 770 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.22E+06	4.91E+14
LONGERON	126.9	8.90E-01	5.43E+09
ROW 2	141.9	1.37E-07	3.12E+04
LONGERON	156.9	1.76E-13	1.14E+00
ROW 3	171.9	5.86E-17	3.26E-03
LONGERON	173.1	4.12E-17	3.19E-03
ROW 4	158.1	6.95E-14	9.52E-01
LONGERON	143.1	4.18E-08	1.93E+04
ROW 5	128.1	2.95E-01	2.57E+09
LONGERON	113.1	5.00E+05	2.21E+14
ROW 6	98.1	9.79E+09	1.33E+18
LONGERON	83.1	6.28E+11	6.68E+19
ROW 7	68.1	1.90E+12	2.01E+20
LONGERON	53.1	3.07E+12	3.23E+20
ROW 8	38.1	4.02E+12	4.23E+20
LONGERON	23.1	4.70E+12	4.95E+20
ROW 9	8.1	5.06E+12	5.33E+20
LONGERON	6.9	5.07E+12	5.34E+20
ROW 10	21.9	4.74E+12	4.99E+20
LONGERON	36.9	4.09E+12	4.30E+20
ROW 11	51.9	3.15E+12	3.32E+20
LONGERON	66.9	2.01E+12	2.11E+20
ROW 12	81.9	7.32E+11	7.72E+19
LONGERON	96.9	1.70E+10	2.18E+18
SPACE END	89.2	2.11E+11	2.32E+19
EARTH END	-90.8	1.41E+11	1.58E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.11E+12	5.38E+20
SIDE DIR	90.0	1.74E+11	1.92E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.70E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 636.6 TO 940.3 K
 ALTITUDE RANGE: 467.7 TO 476.5 KM

 *DATE: MAY 24, 1986 DAY OF YEAR: 144 *
 *CUMULATIVE EXPOSURE TIME: 777 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.16E+06	4.92E+14
LONGERON	126.9	2.74E+00	5.43E+09
ROW 2	141.9	5.93E-07	3.12E+04
LONGERON	156.9	8.16E-13	1.14E+00
ROW 3	171.8	2.19E-16	3.26E-03
LONGERON	173.1	1.01E-16	3.19E-03
ROW 4	158.1	1.04E-13	9.52E-01
LONGERON	143.1	4.21E-08	1.93E+04
ROW 5	128.1	2.55E-01	2.57E+09
LONGERON	113.1	4.91E+05	2.21E+14
ROW 6	98.1	1.11E+10	1.34E+18
LONGERON	83.1	6.96E+11	6.73E+19
ROW 7	68.1	2.11E+12	2.02E+20
LONGERON	53.1	3.39E+12	3.25E+20
ROW 8	38.1	4.45E+12	4.26E+20
LONGERON	23.1	5.20E+12	4.98E+20
ROW 9	8.2	5.60E+12	5.36E+20
LONGERON	6.9	5.62E+12	5.38E+20
ROW 10	21.9	5.25E+12	5.02E+20
LONGERON	36.9	4.53E+12	4.33E+20
ROW 11	51.9	3.50E+12	3.34E+20
LONGERON	66.9	2.22E+12	2.12E+20
ROW 12	81.9	8.13E+11	7.76E+19
LONGERON	96.9	2.01E+10	2.19E+18
SPACE END	89.2	2.36E+11	2.33E+19
EARTH END	-90.8	1.58E+11	1.59E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.66E+12	5.42E+20
SIDE DIR	90.0	1.94E+11	1.94E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.42E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 644.6 TO 959.7 K
 ALTITUDE RANGE: 467.9 TO 475.9 KM

 *DATE: MAY 31, 1986 DAY OF YEAR: 151 *
 *CUMULATIVE EXPOSURE TIME: 784 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.38E+06	4.93E+14
LONGERON	126.9	2.81E+00	5.43E+09
ROW 2	141.9	5.37E-07	3.12E+04
LONGERON	156.9	7.30E-13	1.14E+00
ROW 3	171.8	2.28E-16	3.26E-03
LONGERON	173.1	1.29E-16	3.19E-03
ROW 4	158.1	1.49E-13	9.52E-01
LONGERON	143.1	5.53E-08	1.93E+04
ROW 5	128.1	2.78E-01	2.57E+09
LONGERON	113.1	5.19E+05	2.21E+14
ROW 6	98.1	1.18E+10	1.34E+18
LONGERON	83.1	7.22E+11	6.77E+19
ROW 7	68.1	2.18E+12	2.03E+20
LONGERON	53.1	3.51E+12	3.27E+20
ROW 8	38.1	4.61E+12	4.29E+20
LONGERON	23.1	5.39E+12	5.01E+20
ROW 9	8.2	5.80E+12	5.40E+20
LONGERON	6.9	5.81E+12	5.41E+20
ROW 10	21.9	5.44E+12	5.06E+20
LONGERON	36.9	4.69E+12	4.36E+20
ROW 11	51.9	3.62E+12	3.36E+20
LONGERON	66.9	2.30E+12	2.14E+20
ROW 12	81.9	8.39E+11	7.81E+19
LONGERON	96.9	2.11E+10	2.21E+18
SPACE END	89.2	2.45E+11	2.35E+19
EARTH END	-90.8	1.64E+11	1.60E+19
	CONSTANT INCIDENCE ANGLE (DEGREES)		
RAM DIR	0.0	5.86E+12	5.45E+20
SIDE DIR	90.0	2.02E+11	1.95E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.67E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 644.0 TO 980.9 K
 ALTITUDE RANGE: 467.5 TO 476.7 KM

 *DATE: JUNE 7, 1986 DAY OF YEAR: 158 *
 *CUMULATIVE EXPOSURE TIME: 791 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.47E+06	4.94E+14
LONGERON	126.9	1.08E+00	5.44E+09
ROW 2	141.9	1.38E-07	3.12E+04
LONGERON	156.9	1.67E-13	1.14E+00
ROW 3	171.9	6.47E-17	3.26E-03
LONGERON	173.1	5.47E-17	3.19E-03
ROW 4	158.1	9.57E-14	9.52E-01
LONGERON	143.1	4.91E-08	1.93E+04
ROW 5	128.1	2.76E-01	2.57E+09
LONGERON	113.1	4.58E+05	2.22E+14
ROW 6	98.1	9.97E+09	1.35E+18
LONGERON	83.1	6.29E+11	6.81E+19
ROW 7	68.1	1.90E+12	2.04E+20
LONGERON	53.1	3.06E+12	3.29E+20
ROW 8	38.1	4.01E+12	4.31E+20
LONGERON	23.1	4.69E+12	5.04E+20
ROW 9	8.1	5.04E+12	5.43E+20
LONGERON	6.9	5.06E+12	5.44E+20
ROW 10	21.9	4.73E+12	5.09E+20
LONGERON	36.9	4.07E+12	4.38E+20
ROW 11	51.9	3.14E+12	3.38E+20
LONGERON	66.9	2.00E+12	2.15E+20
ROW 12	81.9	7.28E+11	7.86E+19
LONGERON	96.9	1.74E+10	2.22E+18
SPACE END	89.2	2.12E+11	2.36E+19
EARTH END	-90.8	1.41E+11	1.60E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.10E+12	5.48E+20
SIDE DIR	90.0	1.74E+11	1.96E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.67E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 633.3 TO 978.6 K
 ALTITUDE RANGE: 467.5 TO 476.9 KM

 *DATE: JUNE 14, 1986 DAY OF YEAR: 165 *
 *CUMULATIVE EXPOSURE TIME: 798 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	6.55E+05	4.95E+14
LONGERON	126.9	2.45E-01	5.44E+09
ROW 2	141.9	2.03E-08	3.12E+04
LONGERON	156.9	2.13E-14	1.14E+00
ROW 3	171.9	9.50E-18	3.26E-03
LONGERON	173.0	1.18E-17	3.19E-03
ROW 4	158.1	3.49E-14	9.52E-01
LONGERON	143.1	2.96E-08	1.93E+04
ROW 5	128.1	2.32E-01	2.57E+09
LONGERON	113.1	3.95E+05	2.22E+14
ROW 6	98.1	7.88E+09	1.35E+18
LONGERON	83.1	5.07E+11	6.84E+19
ROW 7	68.1	1.53E+12	2.05E+20
LONGERON	53.1	2.45E+12	3.31E+20
ROW 8	38.1	3.21E+12	4.33E+20
LONGERON	23.1	3.76E+12	5.06E+20
ROW 9	8.1	4.04E+12	5.45E+20
LONGERON	7.0	4.05E+12	5.47E+20
ROW 10	21.9	3.79E+12	5.11E+20
LONGERON	36.9	3.26E+12	4.40E+20
ROW 11	51.9	2.52E+12	3.40E+20
LONGERON	66.9	1.60E+12	2.16E+20
ROW 12	81.9	5.79E+11	7.89E+19
LONGERON	96.9	1.27E+10	2.22E+18
SPACE END	89.2	1.68E+11	2.37E+19
EARTH END	-90.8	1.11E+11	1.61E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	4.08E+12	5.51E+20
SIDE DIR	90.0	1.38E+11	1.97E+19

AVERAGE ATOMIC OXYGEN DENSITY: 5.34E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 614.2 TO 956.3 K
 ALTITUDE RANGE: 467.4 TO 476.8 KM

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*DATE:      JUNE 21, 1986      DAY OF YEAR: 172 *
*CUMULATIVE EXPOSURE TIME: 805 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.52E+05	4.95E+14
LONGERON	126.9	1.21E-01	5.44E+09
ROW 2	141.9	7.56E-09	3.12E+04
LONGERON	156.9	6.43E-15	1.14E+00
ROW 3	171.9	2.70E-18	3.26E-03
LONGERON	173.0	3.79E-18	3.19E-03
ROW 4	158.1	1.45E-14	9.52E-01
LONGERON	143.1	1.70E-08	1.93E+04
ROW 5	128.1	1.79E-01	2.57E+09
LONGERON	113.1	3.49E+05	2.22E+14
ROW 6	98.1	6.87E+09	1.36E+18
LONGERON	83.1	4.46E+11	6.86E+19
ROW 7	68.1	1.34E+12	2.06E+20
LONGERON	53.1	2.16E+12	3.32E+20
ROW 8	38.1	2.83E+12	4.35E+20
LONGERON	23.1	3.31E+12	5.08E+20
ROW 9	8.1	3.56E+12	5.47E+20
LONGERON	7.0	3.57E+12	5.49E+20
ROW 10	21.9	3.33E+12	5.13E+20
LONGERON	36.9	2.87E+12	4.42E+20
ROW 11	51.9	2.21E+12	3.41E+20
LONGERON	66.9	1.41E+12	2.17E+20
ROW 12	81.9	5.10E+11	7.92E+19
LONGERON	96.9	1.08E+10	2.23E+18
SPACE END	89.2	1.47E+11	2.38E+19
EARTH END	-90.8	9.72E+10	1.62E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.59E+12	5.53E+20
SIDE DIR	90.0	1.20E+11	1.97E+19

AVERAGE ATOMIC OXYGEN DENSITY: 4.70E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 611.9 TO 927.7 K
 ALTITUDE RANGE: 467.6 TO 476.0 KM

 *DATE: JUNE 28, 1986 DAY OF YEAR: 179 *
 *CUMULATIVE EXPOSURE TIME: 812 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	6.30E+05	4.95E+14
LONGERON	126.9	2.41E-01	5.44E+09
ROW 2	141.9	1.95E-08	3.12E+04
LONGERON	156.9	1.70E-14	1.14E+00
ROW 3	171.9	5.51E-18	3.26E-03
LONGERON	173.0	5.16E-18	3.19E-03
ROW 4	158.1	1.40E-14	9.52E-01
LONGERON	143.1	1.42E-08	1.93E+04
ROW 5	128.1	1.55E-01	2.57E+09
LONGERON	113.1	3.40E+05	2.22E+14
ROW 6	98.1	7.17E+09	1.36E+18
LONGERON	83.1	4.70E+11	6.89E+19
ROW 7	68.1	1.42E+12	2.07E+20
LONGERON	53.1	2.29E+12	3.33E+20
ROW 8	38.1	3.00E+12	4.37E+20
LONGERON	23.1	3.51E+12	5.11E+20
ROW 9	8.1	3.78E+12	5.50E+20
LONGERON	7.0	3.79E+12	5.51E+20
ROW 10	21.9	3.54E+12	5.15E+20
LONGERON	36.9	3.05E+12	4.44E+20
ROW 11	51.9	2.35E+12	3.43E+20
LONGERON	66.9	1.50E+12	2.18E+20
ROW 12	81.9	5.45E+11	7.96E+19
LONGERON	96.9	1.21E+10	2.24E+18
SPACE END	89.2	1.56E+11	2.39E+19
EARTH END	-90.8	1.04E+11	1.62E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.82E+12	5.55E+20
SIDE DIR	90.0	1.28E+11	1.98E+19

AVERAGE ATOMIC OXYGEN DENSITY: 5.00E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 614.4 TO 928.0 K
 ALTITUDE RANGE: 467.5 TO 476.0 KM


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*DATE:      JULY   5, 1986      DAY OF YEAR:  186 *
*CUMULATIVE EXPOSURE TIME:  819 DAYS                *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	7.85E+05	4.96E+14
LONGERON	126.9	4.45E-01	5.44E+09
ROW 2	141.9	4.41E-08	3.12E+04
LONGERON	156.9	3.43E-14	1.14E+00
ROW 3	171.8	7.45E-18	3.26E-03
LONGERON	173.1	4.22E-18	3.19E-03
ROW 4	158.1	7.63E-15	9.52E-01
LONGERON	143.1	6.59E-09	1.93E+04
ROW 5	128.1	8.08E-02	2.57E+09
LONGERON	113.1	2.40E+05	2.22E+14
ROW 6	98.1	6.73E+09	1.37E+18
LONGERON	83.1	4.63E+11	6.92E+19
ROW 7	68.1	1.40E+12	2.08E+20
LONGERON	53.1	2.26E+12	3.35E+20
ROW 8	38.1	2.97E+12	4.39E+20
LONGERON	23.1	3.47E+12	5.13E+20
ROW 9	8.2	3.73E+12	5.52E+20
LONGERON	6.9	3.74E+12	5.53E+20
ROW 10	21.9	3.50E+12	5.17E+20
LONGERON	36.9	3.02E+12	4.46E+20
ROW 11	51.9	2.33E+12	3.44E+20
LONGERON	66.9	1.48E+12	2.19E+20
ROW 12	81.9	5.41E+11	7.99E+19
LONGERON	96.9	1.22E+10	2.25E+18
SPACE END	89.2	1.55E+11	2.40E+19
EARTH END	-90.8	1.03E+11	1.63E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.77E+12	5.58E+20
SIDE DIR	90.0	1.27E+11	1.99E+19

AVERAGE ATOMIC OXYGEN DENSITY: 4.94E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 614.0 TO 925.2 K
 ALTITUDE RANGE: 467.3 TO 476.7 KM

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*DATE:      JULY 12, 1986      DAY OF YEAR: 193 *
*CUMULATIVE EXPOSURE TIME: 826 DAYS      *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	8.98E+05	4.96E+14
LONGERON	126.9	5.92E-01	5.44E+09
ROW 2	141.9	5.51E-08	3.12E+04
LONGERON	156.9	3.48E-14	1.14E+00
ROW 3	171.8	5.75E-18	3.26E-03
LONGERON	173.1	2.48E-18	3.19E-03
ROW 4	158.1	3.63E-15	9.52E-01
LONGERON	143.1	2.79E-09	1.93E+04
ROW 5	128.1	3.68E-02	2.57E+09
LONGERON	113.1	1.60E+05	2.22E+14
ROW 6	98.1	6.22E+09	1.37E+18
LONGERON	83.1	4.43E+11	6.95E+19
ROW 7	68.1	1.34E+12	2.09E+20
LONGERON	53.1	2.16E+12	3.36E+20
ROW 8	38.1	2.84E+12	4.40E+20
LONGERON	23.1	3.32E+12	5.15E+20
ROW 9	8.2	3.57E+12	5.54E+20
LONGERON	6.9	3.58E+12	5.56E+20
ROW 10	21.9	3.35E+12	5.19E+20
LONGERON	36.9	2.89E+12	4.47E+20
ROW 11	51.9	2.23E+12	3.45E+20
LONGERON	66.9	1.42E+12	2.20E+20
ROW 12	81.9	5.17E+11	8.02E+19
LONGERON	96.9	1.17E+10	2.25E+18
SPACE END	89.2	1.47E+11	2.41E+19
EARTH END	-90.8	9.74E+10	1.63E+19
	CONSTANT INCIDENCE ANGLE (DEGREES)		
RAM DIR	0.0	3.61E+12	5.60E+20
SIDE DIR	90.0	1.21E+11	2.00E+19

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AVERAGE ATOMIC OXYGEN DENSITY: 4.73E+06 ATOMS/CM**3
TEMPERATURE RANGE: 598.3 TO 905.4 K
ALTITUDE RANGE: 467.3 TO 476.7 KM

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 *DATE: JULY 19, 1986 DAY OF YEAR: 200 *
 *CUMULATIVE EXPOSURE TIME: 833 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	7.84E+05	4.97E+14
LONGERON	126.9	3.99E-01	5.44E+09
ROW 2	141.9	2.87E-08	3.12E+04
LONGERON	156.9	1.73E-14	1.14E+00
ROW 3	171.8	3.58E-18	3.26E-03
LONGERON	173.1	2.23E-18	3.19E-03
ROW 4	158.1	4.40E-15	9.52E-01
LONGERON	143.1	3.69E-09	1.93E+04
ROW 5	128.1	4.27E-02	2.57E+09
LONGERON	113.1	1.61E+05	2.23E+14
ROW 6	98.1	6.16E+09	1.37E+18
LONGERON	83.1	4.40E+11	6.97E+19
ROW 7	68.1	1.33E+12	2.10E+20
LONGERON	53.1	2.15E+12	3.37E+20
ROW 8	38.1	2.81E+12	4.42E+20
LONGERON	23.1	3.29E+12	5.17E+20
ROW 9	8.2	3.54E+12	5.56E+20
LONGERON	6.9	3.55E+12	5.58E+20
ROW 10	21.9	3.32E+12	5.21E+20
LONGERON	36.9	2.86E+12	4.49E+20
ROW 11	51.9	2.21E+12	3.47E+20
LONGERON	66.9	1.40E+12	2.20E+20
ROW 12	81.9	5.11E+11	8.05E+19
LONGERON	96.9	1.14E+10	2.26E+18
SPACE END	89.2	1.46E+11	2.42E+19
EARTH END	-90.8	9.62E+10	1.64E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.58E+12	5.62E+20
SIDE DIR	90.0	1.19E+11	2.00E+19

AVERAGE ATOMIC OXYGEN DENSITY: 4.68E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 599.9 TO 905.7 K
 ALTITUDE RANGE: 467.3 TO 476.4 KM

 *DATE: JULY 26, 1986 DAY OF YEAR: 207 *
 *CUMULATIVE EXPOSURE TIME: 840 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	7.03E+05	4.97E+14
LONGERON	126.9	2.68E-01	5.44E+09
ROW 2	141.9	1.87E-08	3.12E+04
LONGERON	156.9	1.49E-14	1.14E+00
ROW 3	171.9	4.85E-18	3.26E-03
LONGERON	173.0	4.85E-18	3.19E-03
ROW 4	158.1	1.34E-14	9.52E-01
LONGERON	143.1	1.23E-08	1.93E+04
ROW 5	128.1	1.18E-01	2.57E+09
LONGERON	113.1	2.76E+05	2.23E+14
ROW 6	98.1	7.23E+09	1.38E+18
LONGERON	83.1	4.87E+11	7.00E+19
ROW 7	68.1	1.47E+12	2.10E+20
LONGERON	53.1	2.37E+12	3.39E+20
ROW 8	38.1	3.10E+12	4.44E+20
LONGERON	23.1	3.63E+12	5.19E+20
ROW 9	8.1	3.90E+12	5.59E+20
LONGERON	7.0	3.91E+12	5.60E+20
ROW 10	21.9	3.66E+12	5.23E+20
LONGERON	36.9	3.15E+12	4.51E+20
ROW 11	51.9	2.43E+12	3.48E+20
LONGERON	66.9	1.55E+12	2.21E+20
ROW 12	81.9	5.62E+11	8.09E+19
LONGERON	96.9	1.25E+10	2.27E+18
SPACE END	89.2	1.62E+11	2.43E+19
EARTH END	-90.8	1.07E+11	1.65E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.94E+12	5.64E+20
SIDE DIR	90.0	1.33E+11	2.01E+19

AVERAGE ATOMIC OXYGEN DENSITY: 5.16E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 616.4 TO 961.0 K
 ALTITUDE RANGE: 467.6 TO 475.6 KM

 *DATE: AUGUST 2, 1986 DAY OF YEAR: 214 *
 *CUMULATIVE EXPOSURE TIME: 847 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	5.55E+05	4.98E+14
LONGERON	126.9	1.67E-01	5.44E+09
ROW 2	141.9	1.13E-08	3.12E+04
LONGERON	156.9	9.36E-15	1.14E+00
ROW 3	171.9	3.38E-18	3.26E-03
LONGERON	173.0	4.03E-18	3.19E-03
ROW 4	158.1	1.40E-14	9.52E-01
LONGERON	143.1	1.60E-08	1.93E+04
ROW 5	128.1	1.71E-01	2.57E+09
LONGERON	113.1	3.61E+05	2.23E+14
ROW 6	98.1	7.62E+09	1.38E+18
LONGERON	83.1	4.93E+11	7.03E+19
ROW 7	68.1	1.48E+12	2.11E+20
LONGERON	53.1	2.39E+12	3.40E+20
ROW 8	38.1	3.13E+12	4.46E+20
LONGERON	23.1	3.65E+12	5.21E+20
ROW 9	8.1	3.93E+12	5.61E+20
LONGERON	7.0	3.94E+12	5.62E+20
ROW 10	21.9	3.68E+12	5.26E+20
LONGERON	36.9	3.17E+12	4.53E+20
ROW 11	51.9	2.45E+12	3.50E+20
LONGERON	66.9	1.55E+12	2.22E+20
ROW 12	81.9	5.64E+11	8.12E+19
LONGERON	96.9	1.22E+10	2.27E+18
SPACE END	89.2	1.63E+11	2.44E+19
EARTH END	-90.8	1.08E+11	1.65E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.97E+12	5.67E+20
SIDE DIR	90.0	1.34E+11	2.02E+19

AVERAGE ATOMIC OXYGEN DENSITY: 5.20E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 621.3 TO 960.6 K
 ALTITUDE RANGE: 467.2 TO 476.1 KM

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*DATE:      AUGUST   9, 1986          DAY OF YEAR:  221 *
*CUMULATIVE EXPOSURE TIME:  854  DAYS                                *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.74E+05	4.98E+14
LONGERON	126.9	7.40E-02	5.44E+09
ROW 2	141.9	3.23E-09	3.12E+04
LONGERON	156.9	2.01E-15	1.14E+00
ROW 3	171.9	6.94E-19	3.26E-03
LONGERON	173.0	9.45E-19	3.19E-03
ROW 4	158.1	4.14E-15	9.52E-01
LONGERON	143.1	6.44E-09	1.93E+04
ROW 5	128.1	9.61E-02	2.57E+09
LONGERON	113.1	2.60E+05	2.23E+14
ROW 6	98.1	6.31E+09	1.39E+18
LONGERON	83.1	4.33E+11	7.06E+19
ROW 7	68.1	1.31E+12	2.12E+20
LONGERON	53.1	2.11E+12	3.41E+20
ROW 8	38.1	2.76E+12	4.47E+20
LONGERON	23.1	3.22E+12	5.23E+20
ROW 9	8.1	3.47E+12	5.63E+20
LONGERON	7.0	3.48E+12	5.65E+20
ROW 10	21.9	3.25E+12	5.28E+20
LONGERON	36.9	2.80E+12	4.55E+20
ROW 11	51.9	2.16E+12	3.51E+20
LONGERON	66.9	1.37E+12	2.23E+20
ROW 12	81.9	4.99E+11	8.15E+19
LONGERON	96.9	1.04E+10	2.28E+18
SPACE END	89.2	1.42E+11	2.45E+19
EARTH END	-90.8	9.39E+10	1.66E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.51E+12	5.69E+20
SIDE DIR	90.0	1.16E+11	2.03E+19

AVERAGE ATOMIC OXYGEN DENSITY: 4.59E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 611.3 TO 930.7 K
 ALTITUDE RANGE: 467.2 TO 476.6 KM

 *DATE: AUGUST 16, 1986 DAY OF YEAR: 228 *
 *CUMULATIVE EXPOSURE TIME: 861 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.22E+05	4.98E+14
LONGERON	126.9	7.62E-02	5.44E+09
ROW 2	141.9	3.51E-09	3.12E+04
LONGERON	156.9	1.74E-15	1.14E+00
ROW 3	171.9	3.86E-19	3.26E-03
LONGERON	173.1	3.38E-19	3.19E-03
ROW 4	158.1	1.18E-15	9.52E-01
LONGERON	143.1	1.91E-09	1.93E+04
ROW 5	128.1	3.75E-02	2.57E+09
LONGERON	113.1	1.50E+05	2.23E+14
ROW 6	98.1	5.09E+09	1.39E+18
LONGERON	83.1	3.82E+11	7.08E+19
ROW 7	68.1	1.16E+12	2.13E+20
LONGERON	53.1	1.87E+12	3.43E+20
ROW 8	38.1	2.45E+12	4.49E+20
LONGERON	23.1	2.86E+12	5.25E+20
ROW 9	8.1	3.08E+12	5.65E+20
LONGERON	6.9	3.09E+12	5.66E+20
ROW 10	21.9	2.89E+12	5.29E+20
LONGERON	36.9	2.49E+12	4.56E+20
ROW 11	51.9	1.92E+12	3.52E+20
LONGERON	66.9	1.22E+12	2.24E+20
ROW 12	81.9	4.45E+11	8.18E+19
LONGERON	96.9	8.94E+09	2.29E+18
SPACE END	89.2	1.25E+11	2.45E+19
EARTH END	-90.8	8.21E+10	1.66E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.12E+12	5.71E+20
SIDE DIR	90.0	1.02E+11	2.03E+19

AVERAGE ATOMIC OXYGEN DENSITY: 4.08E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 599.0 TO 867.2 K
 ALTITUDE RANGE: 467.2 TO 476.5 KM

 *DATE: AUGUST 23, 1986 DAY OF YEAR: 235 *
 *CUMULATIVE EXPOSURE TIME: 868 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.08E+06	4.99E+14
LONGERON	126.9	6.99E-01	5.44E+09
ROW 2	141.9	7.54E-08	3.12E+04
LONGERON	156.9	5.81E-14	1.14E+00
ROW 3	171.8	1.10E-17	3.26E-03
LONGERON	173.1	5.01E-18	3.19E-03
ROW 4	158.1	7.53E-15	9.52E-01
LONGERON	143.1	6.01E-09	1.93E+04
ROW 5	128.1	7.74E-02	2.57E+09
LONGERON	113.1	2.75E+05	2.23E+14
ROW 6	98.1	8.55E+09	1.39E+18
LONGERON	83.1	5.79E+11	7.12E+19
ROW 7	68.1	1.75E+12	2.14E+20
LONGERON	53.1	2.82E+12	3.44E+20
ROW 8	38.1	3.70E+12	4.51E+20
LONGERON	23.1	4.33E+12	5.27E+20
ROW 9	8.2	4.66E+12	5.68E+20
LONGERON	6.9	4.67E+12	5.69E+20
ROW 10	21.9	4.37E+12	5.32E+20
LONGERON	36.9	3.76E+12	4.59E+20
ROW 11	51.9	2.90E+12	3.54E+20
LONGERON	66.9	1.85E+12	2.25E+20
ROW 12	81.9	6.73E+11	8.22E+19
LONGERON	96.9	1.53E+10	2.30E+18
SPACE END	89.2	1.93E+11	2.46E+19
EARTH END	-90.8	1.28E+11	1.67E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	4.71E+12	5.74E+20
SIDE DIR	90.0	1.59E+11	2.04E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.16E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 611.3 TO 951.2 K
 ALTITUDE RANGE: 467.2 TO 475.9 KM

 *DATE: AUGUST 30, 1986 DAY OF YEAR: 242 *
 *CUMULATIVE EXPOSURE TIME: 875 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.75E+06	5.00E+14
LONGERON	126.9	1.32E+00	5.44E+09
ROW 2	141.9	1.44E-07	3.12E+04
LONGERON	156.9	1.13E-13	1.14E+00
ROW 3	171.8	2.33E-17	3.26E-03
LONGERON	173.1	1.16E-17	3.19E-03
ROW 4	158.1	1.69E-14	9.52E-01
LONGERON	143.1	1.12E-08	1.93E+04
ROW 5	128.1	1.16E-01	2.57E+09
LONGERON	113.1	3.74E+05	2.24E+14
ROW 6	98.1	1.10E+10	1.40E+18
LONGERON	83.1	7.07E+11	7.16E+19
ROW 7	68.1	2.14E+12	2.15E+20
LONGERON	53.1	3.44E+12	3.46E+20
ROW 8	38.1	4.51E+12	4.54E+20
LONGERON	23.1	5.28E+12	5.31E+20
ROW 9	8.2	5.68E+12	5.71E+20
LONGERON	6.9	5.70E+12	5.73E+20
ROW 10	21.9	5.33E+12	5.35E+20
LONGERON	36.9	4.59E+12	4.61E+20
ROW 11	51.9	3.54E+12	3.56E+20
LONGERON	66.9	2.25E+12	2.26E+20
ROW 12	81.9	8.21E+11	8.27E+19
LONGERON	96.9	1.97E+10	2.31E+18
SPACE END	89.2	2.38E+11	2.48E+19
EARTH END	-90.8	1.59E+11	1.68E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.74E+12	5.77E+20
SIDE DIR	90.0	1.96E+11	2.06E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.51E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 638.6 TO 954.2 K
 ALTITUDE RANGE: 467.2 TO 475.5 KM

 *DATE: SEPTEMBER 6, 1986 DAY OF YEAR: 249 *
 *CUMULATIVE EXPOSURE TIME: 882 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.01E+06	5.00E+14
LONGERON	126.9	4.49E-01	5.44E+09
ROW 2	141.9	3.06E-08	3.12E+04
LONGERON	156.9	1.93E-14	1.14E+00
ROW 3	171.9	4.56E-18	3.26E-03
LONGERON	173.1	3.28E-18	3.19E-03
ROW 4	158.1	7.11E-15	9.52E-01
LONGERON	143.1	6.20E-09	1.93E+04
ROW 5	128.1	7.18E-02	2.57E+09
LONGERON	113.1	2.55E+05	2.24E+14
ROW 6	98.1	8.92E+09	1.41E+18
LONGERON	83.1	6.19E+11	7.20E+19
ROW 7	68.1	1.87E+12	2.16E+20
LONGERON	53.1	3.02E+12	3.48E+20
ROW 8	38.1	3.95E+12	4.56E+20
LONGERON	23.1	4.62E+12	5.33E+20
ROW 9	8.1	4.98E+12	5.74E+20
LONGERON	6.9	4.99E+12	5.76E+20
ROW 10	21.9	4.66E+12	5.38E+20
LONGERON	36.9	4.02E+12	4.64E+20
ROW 11	51.9	3.10E+12	3.58E+20
LONGERON	66.9	1.97E+12	2.28E+20
ROW 12	81.9	7.18E+11	8.31E+19
LONGERON	96.9	1.60E+10	2.32E+18
SPACE END	89.2	2.06E+11	2.49E+19
EARTH END	-90.8	1.36E+11	1.69E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.03E+12	5.80E+20
SIDE DIR	90.0	1.69E+11	2.07E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.58E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 622.6 TO 928.2 K
 ALTITUDE RANGE: 467.0 TO 476.3 KM

 *DATE: SEPTEMBER 13, 1986 DAY OF YEAR: 256 *
 *CUMULATIVE EXPOSURE TIME: 889 DAYS *

AVERAGES AND RANGES ARE BASED ON 1740 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.23E+06	5.01E+14
LONGERON	126.9	5.73E-01	5.44E+09
ROW 2	141.9	5.97E-08	3.12E+04
LONGERON	156.9	6.89E-14	1.14E+00
ROW 3	171.9	2.65E-17	3.26E-03
LONGERON	173.0	2.58E-17	3.19E-03
ROW 4	158.1	6.20E-14	9.52E-01
LONGERON	143.1	4.57E-08	1.93E+04
ROW 5	128.1	3.31E-01	2.57E+09
LONGERON	113.1	5.70E+05	2.24E+14
ROW 6	98.1	1.17E+10	1.41E+18
LONGERON	83.1	7.43E+11	7.24E+19
ROW 7	68.1	2.24E+12	2.18E+20
LONGERON	53.1	3.61E+12	3.50E+20
ROW 8	38.1	4.73E+12	4.59E+20
LONGERON	23.1	5.53E+12	5.37E+20
ROW 9	8.1	5.95E+12	5.78E+20
LONGERON	7.0	5.97E+12	5.79E+20
ROW 10	21.9	5.58E+12	5.41E+20
LONGERON	36.9	4.81E+12	4.67E+20
ROW 11	51.9	3.71E+12	3.60E+20
LONGERON	66.9	2.36E+12	2.29E+20
ROW 12	81.9	8.57E+11	8.36E+19
LONGERON	96.9	1.98E+10	2.33E+18
SPACE END	89.2	2.49E+11	2.51E+19
EARTH END	-90.8	1.66E+11	1.70E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.01E+12	5.84E+20
SIDE DIR	90.0	2.05E+11	2.08E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.87E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 633.9 TO 982.9 K
 ALTITUDE RANGE: 466.3 TO 477.4 KM

 *DATE: SEPTEMBER 20, 1986 DAY OF YEAR: 263 *
 *CUMULATIVE EXPOSURE TIME: 896 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.48E+06	5.02E+14
LONGERON	126.9	7.97E-01	5.44E+09
ROW 2	141.9	1.01E-07	3.12E+04
LONGERON	156.9	1.27E-13	1.14E+00
ROW 3	171.9	4.92E-17	3.26E-03
LONGERON	173.0	4.82E-17	3.19E-03
ROW 4	158.1	1.21E-13	9.52E-01
LONGERON	143.1	9.13E-08	1.93E+04
ROW 5	128.1	6.24E-01	2.57E+09
LONGERON	113.1	8.79E+05	2.25E+14
ROW 6	98.1	1.40E+10	1.42E+18
LONGERON	83.1	8.36E+11	7.29E+19
ROW 7	68.1	2.52E+12	2.19E+20
LONGERON	53.1	4.06E+12	3.53E+20
ROW 8	38.1	5.32E+12	4.62E+20
LONGERON	23.1	6.21E+12	5.40E+20
ROW 9	8.1	6.69E+12	5.82E+20
LONGERON	7.0	6.70E+12	5.83E+20
ROW 10	21.9	6.26E+12	5.45E+20
LONGERON	36.9	5.40E+12	4.70E+20
ROW 11	51.9	4.16E+12	3.63E+20
LONGERON	66.9	2.65E+12	2.31E+20
ROW 12	81.9	9.63E+11	8.42E+19
LONGERON	96.9	2.28E+10	2.34E+18
SPACE END	89.2	2.81E+11	2.52E+19
EARTH END	-90.8	1.88E+11	1.71E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.75E+12	5.88E+20
SIDE DIR	90.0	2.32E+11	2.09E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.84E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 659.7 TO 989.1 K
 ALTITUDE RANGE: 466.1 TO 477.0 KM

 *DATE: SEPTEMBER 27, 1986 DAY OF YEAR: 270 *
 *CUMULATIVE EXPOSURE TIME: 903 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.44E+06	5.03E+14
LONGERON	126.9	6.41E-01	5.44E+09
ROW 2	141.9	6.87E-08	3.12E+04
LONGERON	156.9	8.61E-14	1.14E+00
ROW 3	171.9	3.94E-17	3.26E-03
LONGERON	173.0	4.59E-17	3.19E-03
ROW 4	158.1	1.20E-13	9.52E-01
LONGERON	143.1	8.82E-08	1.93E+04
ROW 5	128.1	5.95E-01	2.57E+09
LONGERON	113.1	8.62E+05	2.25E+14
ROW 6	98.1	1.43E+10	1.43E+18
LONGERON	83.1	8.63E+11	7.35E+19
ROW 7	68.1	2.60E+12	2.21E+20
LONGERON	53.1	4.19E+12	3.55E+20
ROW 8	38.1	5.49E+12	4.66E+20
LONGERON	23.1	6.42E+12	5.44E+20
ROW 9	8.1	6.91E+12	5.86E+20
LONGERON	7.0	6.93E+12	5.88E+20
ROW 10	21.9	6.47E+12	5.49E+20
LONGERON	36.9	5.58E+12	4.73E+20
ROW 11	51.9	4.31E+12	3.65E+20
LONGERON	66.9	2.74E+12	2.32E+20
ROW 12	81.9	9.97E+11	8.48E+19
LONGERON	96.9	2.35E+10	2.36E+18
SPACE END	89.2	2.90E+11	2.54E+19
EARTH END	-90.8	1.94E+11	1.72E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.98E+12	5.92E+20
SIDE DIR	90.0	2.39E+11	2.11E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.14E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 661.1 TO 967.3 K
 ALTITUDE RANGE: 466.6 TO 475.0 KM

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*DATE:    OCTOBER   4, 1986          DAY OF YEAR:  277 *
*CUMULATIVE EXPOSURE TIME:  910  DAYS                      *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.70E+06	5.04E+14
LONGERON	126.9	1.02E+00	5.44E+09
ROW 2	141.9	1.38E-07	3.12E+04
LONGERON	156.9	1.86E-13	1.14E+00
ROW 3	171.9	7.31E-17	3.26E-03
LONGERON	173.1	6.23E-17	3.19E-03
ROW 4	158.1	1.17E-13	9.52E-01
LONGERON	143.1	6.92E-08	1.93E+04
ROW 5	128.1	4.48E-01	2.57E+09
LONGERON	113.1	7.54E+05	2.26E+14
ROW 6	98.1	1.48E+10	1.44E+18
LONGERON	83.1	9.11E+11	7.40E+19
ROW 7	68.1	2.75E+12	2.22E+20
LONGERON	53.1	4.43E+12	3.58E+20
ROW 8	38.1	5.80E+12	4.69E+20
LONGERON	23.1	6.78E+12	5.48E+20
ROW 9	8.1	7.30E+12	5.90E+20
LONGERON	6.9	7.32E+12	5.92E+20
ROW 10	21.9	6.84E+12	5.53E+20
LONGERON	36.9	5.90E+12	4.77E+20
ROW 11	51.9	4.55E+12	3.68E+20
LONGERON	66.9	2.89E+12	2.34E+20
ROW 12	81.9	1.05E+12	8.55E+19
LONGERON	96.9	2.49E+10	2.37E+18
SPACE END	89.2	3.07E+11	2.56E+19
EARTH END	-90.8	2.05E+11	1.74E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.38E+12	5.96E+20
SIDE DIR	90.0	2.53E+11	2.12E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.66E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 664.0 TO 965.0 K
 ALTITUDE RANGE: 466.0 TO 475.8 KM

 *DATE: OCTOBER 11, 1986 DAY OF YEAR: 284 *
 *CUMULATIVE EXPOSURE TIME: 917 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.81E+06	5.06E+14
LONGERON	126.9	3.21E+00	5.44E+09
ROW 2	141.9	6.23E-07	3.12E+04
LONGERON	156.9	7.68E-13	1.14E+00
ROW 3	171.8	1.94E-16	3.26E-03
LONGERON	173.1	9.17E-17	3.19E-03
ROW 4	158.1	1.05E-13	9.52E-01
LONGERON	143.1	4.85E-08	1.93E+04
ROW 5	128.1	3.21E-01	2.57E+09
LONGERON	113.1	6.87E+05	2.26E+14
ROW 6	98.1	1.61E+10	1.45E+18
LONGERON	83.1	9.96E+11	7.46E+19
ROW 7	68.1	3.01E+12	2.24E+20
LONGERON	53.1	4.84E+12	3.61E+20
ROW 8	38.1	6.35E+12	4.73E+20
LONGERON	23.1	7.42E+12	5.53E+20
ROW 9	8.2	7.99E+12	5.95E+20
LONGERON	6.9	8.01E+12	5.97E+20
ROW 10	21.9	7.49E+12	5.58E+20
LONGERON	36.9	6.46E+12	4.81E+20
ROW 11	51.9	4.98E+12	3.71E+20
LONGERON	66.9	3.17E+12	2.36E+20
ROW 12	81.9	1.16E+12	8.62E+19
LONGERON	96.9	2.83E+10	2.39E+18
SPACE END	89.2	3.37E+11	2.58E+19
EARTH END	-90.8	2.25E+11	1.75E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	8.07E+12	6.01E+20
SIDE DIR	90.0	2.78E+11	2.14E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.06E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 666.2 TO 970.1 K
 ALTITUDE RANGE: 465.9 TO 477.1 KM

 *DATE: OCTOBER 18, 1986 DAY OF YEAR: 291 *
 *CUMULATIVE EXPOSURE TIME: 924 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.60E+06	5.08E+14
LONGERON	126.9	7.61E+00	5.45E+09
ROW 2	141.9	2.12E-06	3.12E+04
LONGERON	156.9	3.64E-12	1.14E+00
ROW 3	171.8	1.16E-15	3.26E-03
LONGERON	173.1	5.73E-16	3.19E-03
ROW 4	158.1	5.41E-13	9.52E-01
LONGERON	143.1	1.63E-07	1.93E+04
ROW 5	128.1	6.50E-01	2.57E+09
LONGERON	113.1	9.94E+05	2.27E+14
ROW 6	98.1	2.00E+10	1.46E+18
LONGERON	83.1	1.17E+12	7.53E+19
ROW 7	68.1	3.52E+12	2.26E+20
LONGERON	53.1	5.67E+12	3.64E+20
ROW 8	38.1	7.44E+12	4.78E+20
LONGERON	23.1	8.70E+12	5.58E+20
ROW 9	8.2	9.36E+12	6.01E+20
LONGERON	6.9	9.39E+12	6.02E+20
ROW 10	21.9	8.77E+12	5.63E+20
LONGERON	36.9	7.56E+12	4.85E+20
ROW 11	51.9	5.84E+12	3.74E+20
LONGERON	66.9	3.71E+12	2.38E+20
ROW 12	81.9	1.35E+12	8.70E+19
LONGERON	96.9	3.52E+10	2.41E+18
SPACE END	89.2	4.00E+11	2.60E+19
EARTH END	-90.8	2.68E+11	1.77E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	9.46E+12	6.07E+20
SIDE DIR	90.0	3.30E+11	2.16E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.24E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 679.6 TO 1001.7 K
 ALTITUDE RANGE: 465.8 TO 477.1 KM

 *DATE: OCTOBER 25, 1986 DAY OF YEAR: 298 *
 *CUMULATIVE EXPOSURE TIME: 931 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.82E+06	5.11E+14
LONGERON	126.9	5.22E+00	5.45E+09
ROW 2	141.9	1.44E-06	3.12E+04
LONGERON	156.9	3.12E-12	1.14E+00
ROW 3	171.9	1.47E-15	3.26E-03
LONGERON	173.1	1.07E-15	3.19E-03
ROW 4	158.1	1.23E-12	9.52E-01
LONGERON	143.1	3.58E-07	1.93E+04
ROW 5	128.1	1.10E+00	2.57E+09
LONGERON	113.1	1.16E+06	2.27E+14
ROW 6	98.1	1.99E+10	1.47E+18
LONGERON	83.1	1.16E+12	7.60E+19
ROW 7	68.1	3.49E+12	2.28E+20
LONGERON	53.1	5.62E+12	3.68E+20
ROW 8	38.1	7.36E+12	4.82E+20
LONGERON	23.1	8.61E+12	5.63E+20
ROW 9	8.1	9.26E+12	6.06E+20
LONGERON	6.9	9.29E+12	6.08E+20
ROW 10	21.9	8.68E+12	5.68E+20
LONGERON	36.9	7.48E+12	4.90E+20
ROW 11	51.9	5.77E+12	3.78E+20
LONGERON	66.9	3.67E+12	2.40E+20
ROW 12	81.9	1.34E+12	8.78E+19
LONGERON	96.9	3.41E+10	2.43E+18

SPACE END	89.2	3.95E+11	2.63E+19
EARTH END	-90.8	2.65E+11	1.78E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	9.36E+12	6.13E+20
SIDE DIR	90.0	3.26E+11	2.18E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.23E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 691.6 TO 1000.0 K
 ALTITUDE RANGE: 465.8 TO 476.1 KM

 *DATE: NOVEMBER 1, 1986 DAY OF YEAR: 305 *
 *CUMULATIVE EXPOSURE TIME: 938 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.46E+06	5.13E+14
LONGERON	126.9	7.82E+00	5.45E+09
ROW 2	141.9	4.08E-06	3.12E+04
LONGERON	156.9	1.74E-11	1.14E+00
ROW 3	171.9	1.23E-14	3.26E-03
LONGERON	173.0	9.22E-15	3.19E-03
ROW 4	158.1	8.66E-12	9.52E-01
LONGERON	143.1	1.83E-06	1.93E+04
ROW 5	128.1	3.64E+00	2.58E+09
LONGERON	113.1	2.11E+06	2.29E+14
ROW 6	98.1	2.28E+10	1.49E+18
LONGERON	83.1	1.24E+12	7.68E+19
ROW 7	68.1	3.72E+12	2.31E+20
LONGERON	53.1	5.99E+12	3.71E+20
ROW 8	38.1	7.85E+12	4.87E+20
LONGERON	23.1	9.18E+12	5.69E+20
ROW 9	8.1	9.88E+12	6.12E+20
LONGERON	7.0	9.91E+12	6.14E+20
ROW 10	21.9	9.26E+12	5.74E+20
LONGERON	36.9	7.98E+12	4.95E+20
ROW 11	51.9	6.16E+12	3.82E+20
LONGERON	66.9	3.92E+12	2.43E+20
ROW 12	81.9	1.43E+12	8.86E+19
LONGERON	96.9	3.79E+10	2.45E+18
SPACE END	89.2	4.25E+11	2.65E+19
EARTH END	-90.8	2.87E+11	1.80E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	9.98E+12	6.19E+20
SIDE DIR	90.0	3.52E+11	2.20E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.31E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 700.7 TO 1071.9 K
 ALTITUDE RANGE: 466.6 TO 474.2 KM

 *DATE: NOVEMBER 8, 1986 DAY OF YEAR: 312 *
 *CUMULATIVE EXPOSURE TIME: 945 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.90E+06	5.15E+14
LONGERON	126.9	3.82E+00	5.46E+09
ROW 2	141.9	1.73E-06	3.12E+04
LONGERON	156.9	6.64E-12	1.14E+00
ROW 3	171.9	4.46E-15	3.26E-03
LONGERON	173.0	3.61E-15	3.19E-03
ROW 4	158.1	4.18E-12	9.52E-01
LONGERON	143.1	1.13E-06	1.93E+04
ROW 5	128.1	2.79E+00	2.58E+09
LONGERON	113.1	1.78E+06	2.30E+14
ROW 6	98.1	1.93E+10	1.50E+18
LONGERON	83.1	1.07E+12	7.74E+19
ROW 7	68.1	3.23E+12	2.33E+20
LONGERON	53.1	5.20E+12	3.75E+20
ROW 8	38.1	6.82E+12	4.91E+20
LONGERON	23.1	7.97E+12	5.74E+20
ROW 9	8.1	8.58E+12	6.18E+20
LONGERON	7.0	8.60E+12	6.19E+20
ROW 10	21.9	8.04E+12	5.79E+20
LONGERON	36.9	6.93E+12	4.99E+20
ROW 11	51.9	5.35E+12	3.85E+20
LONGERON	66.9	3.40E+12	2.45E+20
ROW 12	81.9	1.24E+12	8.94E+19
LONGERON	96.9	3.14E+10	2.47E+18
SPACE END	89.2	3.66E+11	2.68E+19
EARTH END	-90.8	2.46E+11	1.81E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	8.67E+12	6.24E+20
SIDE DIR	90.0	3.02E+11	2.22E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.14E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 672.2 TO 1058.4 K
 ALTITUDE RANGE: 465.7 TO 476.1 KM

 *DATE: NOVEMBER 15, 1986 DAY OF YEAR: 319 *
 *CUMULATIVE EXPOSURE TIME: 952 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.54E+06	5.16E+14
LONGERON	126.9	9.88E-01	5.46E+09
ROW 2	141.9	2.04E-07	3.12E+04
LONGERON	156.9	4.73E-13	1.14E+00
ROW 3	171.9	3.07E-16	3.26E-03
LONGERON	173.1	3.54E-16	3.19E-03
ROW 4	158.1	6.66E-13	9.52E-01
LONGERON	143.1	2.91E-07	1.93E+04
ROW 5	128.1	1.13E+00	2.58E+09
LONGERON	113.1	1.05E+06	2.30E+14
ROW 6	98.1	1.47E+10	1.51E+18
LONGERON	83.1	8.80E+11	7.79E+19
ROW 7	68.1	2.65E+12	2.34E+20
LONGERON	53.1	4.27E+12	3.77E+20
ROW 8	38.1	5.60E+12	4.94E+20
LONGERON	23.1	6.54E+12	5.78E+20
ROW 9	8.1	7.04E+12	6.22E+20
LONGERON	6.9	7.06E+12	6.24E+20
ROW 10	21.9	6.60E+12	5.83E+20
LONGERON	36.9	5.68E+12	5.02E+20
ROW 11	51.9	4.39E+12	3.88E+20
LONGERON	66.9	2.79E+12	2.46E+20
ROW 12	81.9	1.01E+12	9.00E+19
LONGERON	96.9	2.38E+10	2.49E+18
SPACE END	89.2	2.96E+11	2.69E+19
EARTH END	-90.8	1.98E+11	1.83E+19
	CONSTANT INCIDENCE ANGLE (DEGREES)		
RAM DIR	0.0	7.11E+12	6.28E+20
SIDE DIR	90.0	2.44E+11	2.23E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.31E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 662.2 TO 1025.9 K
 ALTITUDE RANGE: 465.7 TO 476.7 KM

 *DATE: NOVEMBER 22, 1986 DAY OF YEAR: 326 *
 *CUMULATIVE EXPOSURE TIME: 959 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.28E+06	5.18E+14
LONGERON	126.9	4.96E+00	5.46E+09
ROW 2	141.9	2.11E-06	3.12E+04
LONGERON	156.9	8.41E-12	1.14E+00
ROW 3	171.8	6.54E-15	3.26E-03
LONGERON	173.1	5.79E-15	3.19E-03
ROW 4	158.1	5.94E-12	9.52E-01
LONGERON	143.1	1.22E-06	1.93E+04
ROW 5	128.1	2.37E+00	2.58E+09
LONGERON	113.1	1.48E+06	2.31E+14
ROW 6	98.1	1.84E+10	1.52E+18
LONGERON	83.1	1.04E+12	7.86E+19
ROW 7	68.1	3.13E+12	2.36E+20
LONGERON	53.1	5.03E+12	3.80E+20
ROW 8	38.1	6.60E+12	4.98E+20
LONGERON	23.1	7.71E+12	5.82E+20
ROW 9	8.2	8.30E+12	6.27E+20
LONGERON	6.9	8.32E+12	6.29E+20
ROW 10	21.9	7.78E+12	5.88E+20
LONGERON	36.9	6.70E+12	5.06E+20
ROW 11	51.9	5.17E+12	3.91E+20
LONGERON	66.9	3.29E+12	2.48E+20
ROW 12	81.9	1.20E+12	9.07E+19
LONGERON	96.9	3.05E+10	2.51E+18
SPACE END	89.2	3.54E+11	2.72E+19
EARTH END	-90.8	2.38E+11	1.84E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	8.38E+12	6.33E+20
SIDE DIR	90.0	2.92E+11	2.25E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.10E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 664.7 TO 1063.2 K
 ALTITUDE RANGE: 465.6 TO 476.6 KM

 *DATE: NOVEMBER 29, 1986 DAY OF YEAR: 333 *
 *CUMULATIVE EXPOSURE TIME: 966 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.96E+06	5.21E+14
LONGERON	126.9	1.13E+01	5.47E+09
ROW 2	141.9	5.24E-06	3.12E+04
LONGERON	156.9	1.79E-11	1.14E+00
ROW 3	171.8	1.13E-14	3.26E-03
LONGERON	173.1	8.48E-15	3.19E-03
ROW 4	158.1	7.61E-12	9.52E-01
LONGERON	143.1	1.34E-06	1.93E+04
ROW 5	128.1	2.23E+00	2.58E+09
LONGERON	113.1	1.37E+06	2.32E+14
ROW 6	98.1	1.87E+10	1.53E+18
LONGERON	83.1	1.06E+12	7.92E+19
ROW 7	68.1	3.18E+12	2.38E+20
LONGERON	53.1	5.12E+12	3.83E+20
ROW 8	38.1	6.71E+12	5.02E+20
LONGERON	23.1	7.85E+12	5.87E+20
ROW 9	8.2	8.45E+12	6.32E+20
LONGERON	6.9	8.47E+12	6.34E+20
ROW 10	21.9	7.92E+12	5.92E+20
LONGERON	36.9	6.82E+12	5.10E+20
ROW 11	51.9	5.27E+12	3.94E+20
LONGERON	66.9	3.35E+12	2.50E+20
ROW 12	81.9	1.22E+12	9.15E+19
LONGERON	96.9	3.25E+10	2.53E+18
SPACE END	89.2	3.62E+11	2.74E+19
EARTH END	-90.8	2.44E+11	1.85E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	8.53E+12	6.38E+20
SIDE DIR	90.0	2.99E+11	2.27E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.12E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 657.3 TO 1062.4 K
 ALTITUDE RANGE: 465.8 TO 474.9 KM

 *DATE: DECEMBER 6, 1986 DAY OF YEAR: 340 *
 *CUMULATIVE EXPOSURE TIME: 973 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.81E+06	5.23E+14
LONGERON	126.9	4.46E+00	5.47E+09
ROW 2	141.9	1.37E-06	3.12E+04
LONGERON	156.9	3.12E-12	1.14E+00
ROW 3	171.9	1.46E-15	3.26E-03
LONGERON	173.1	9.82E-16	3.19E-03
ROW 4	158.1	9.82E-13	9.52E-01
LONGERON	143.1	2.38E-07	1.93E+04
ROW 5	128.1	6.48E-01	2.58E+09
LONGERON	113.1	6.85E+05	2.32E+14
ROW 6	98.1	1.32E+10	1.54E+18
LONGERON	83.1	8.14E+11	7.97E+19
ROW 7	68.1	2.45E+12	2.40E+20
LONGERON	53.1	3.95E+12	3.86E+20
ROW 8	38.1	5.17E+12	5.05E+20
LONGERON	23.1	6.05E+12	5.91E+20
ROW 9	8.1	6.51E+12	6.36E+20
LONGERON	6.9	6.53E+12	6.38E+20
ROW 10	21.9	6.10E+12	5.96E+20
LONGERON	36.9	5.26E+12	5.14E+20
ROW 11	51.9	4.06E+12	3.96E+20
LONGERON	66.9	2.58E+12	2.52E+20
ROW 12	81.9	9.39E+11	9.20E+19
LONGERON	96.9	2.31E+10	2.54E+18
SPACE END	89.2	2.75E+11	2.75E+19
EARTH END	-90.8	1.83E+11	1.87E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.58E+12	6.42E+20
SIDE DIR	90.0	2.26E+11	2.28E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.61E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 633.7 TO 1033.2 K
 ALTITUDE RANGE: 465.8 TO 474.8 KM

 *DATE: DECEMBER 13, 1986 DAY OF YEAR: 347 *
 *CUMULATIVE EXPOSURE TIME: 980 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.18E+06	5.24E+14
LONGERON	126.9	3.31E+00	5.47E+09
ROW 2	141.9	1.17E-06	3.12E+04
LONGERON	156.9	3.31E-12	1.14E+00
ROW 3	171.9	1.78E-15	3.26E-03
LONGERON	173.0	1.17E-15	3.19E-03
ROW 4	158.1	1.07E-12	9.52E-01
LONGERON	143.1	2.50E-07	1.93E+04
ROW 5	128.1	7.05E-01	2.58E+09
LONGERON	113.1	6.89E+05	2.33E+14
ROW 6	98.1	1.16E+10	1.55E+18
LONGERON	83.1	7.18E+11	8.01E+19
ROW 7	68.1	2.17E+12	2.41E+20
LONGERON	53.1	3.50E+12	3.88E+20
ROW 8	38.1	4.58E+12	5.08E+20
LONGERON	23.1	5.36E+12	5.94E+20
ROW 9	8.1	5.77E+12	6.39E+20
LONGERON	7.0	5.78E+12	6.41E+20
ROW 10	21.9	5.41E+12	5.99E+20
LONGERON	36.9	4.66E+12	5.16E+20
ROW 11	51.9	3.60E+12	3.99E+20
LONGERON	66.9	2.29E+12	2.53E+20
ROW 12	81.9	8.34E+11	9.25E+19
LONGERON	96.9	2.03E+10	2.55E+18
SPACE END	89.2	2.42E+11	2.77E+19
EARTH END	-90.8	1.62E+11	1.88E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	5.83E+12	6.46E+20
SIDE DIR	90.0	2.00E+11	2.29E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.63E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 631.5 TO 1039.1 K
 ALTITUDE RANGE: 465.5 TO 476.4 KM


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*****
*DATE:  DECEMBER 20, 1986          DAY OF YEAR:  354 *
*CUMULATIVE EXPOSURE TIME:  987  DAYS                *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.94E+06	5.25E+14
LONGERON	126.9	3.05E+00	5.47E+09
ROW 2	141.9	1.23E-06	3.12E+04
LONGERON	156.9	3.82E-12	1.14E+00
ROW 3	171.9	2.11E-15	3.26E-03
LONGERON	173.0	1.42E-15	3.19E-03
ROW 4	158.1	1.39E-12	9.52E-01
LONGERON	143.1	3.64E-07	1.93E+04
ROW 5	128.1	1.07E+00	2.58E+09
LONGERON	113.1	8.79E+05	2.33E+14
ROW 6	98.1	1.14E+10	1.55E+18
LONGERON	83.1	6.86E+11	8.06E+19
ROW 7	68.1	2.08E+12	2.42E+20
LONGERON	53.1	3.34E+12	3.90E+20
ROW 8	38.1	4.38E+12	5.11E+20
LONGERON	23.1	5.12E+12	5.97E+20
ROW 9	8.1	5.51E+12	6.43E+20
LONGERON	7.0	5.53E+12	6.45E+20
ROW 10	21.9	5.17E+12	6.02E+20
LONGERON	36.9	4.45E+12	5.19E+20
ROW 11	51.9	3.44E+12	4.01E+20
LONGERON	66.9	2.19E+12	2.55E+20
ROW 12	81.9	7.98E+11	9.30E+19
LONGERON	96.9	1.95E+10	2.56E+18
SPACE END	89.2	2.32E+11	2.78E+19
EARTH END	-90.8	1.56E+11	1.88E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.57E+12	6.49E+20
SIDE DIR	90.0	1.91E+11	2.31E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.31E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 623.4 TO 1042.1 K
 ALTITUDE RANGE: 465.5 TO 476.5 KM

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*****
*DATE:  DECEMBER 27, 1986          DAY OF YEAR: 361 *
*CUMULATIVE EXPOSURE TIME: 994 DAYS                      *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.21E+06	5.26E+14
LONGERON	126.9	1.19E+00	5.47E+09
ROW 2	141.9	3.25E-07	3.12E+04
LONGERON	156.9	7.66E-13	1.14E+00
ROW 3	171.9	3.92E-16	3.26E-03
LONGERON	173.0	3.20E-16	3.19E-03
ROW 4	158.1	4.75E-13	9.52E-01
LONGERON	143.1	1.92E-07	1.93E+04
ROW 5	128.1	7.64E-01	2.58E+09
LONGERON	113.1	7.35E+05	2.34E+14
ROW 6	98.1	1.00E+10	1.56E+18
LONGERON	83.1	6.11E+11	8.09E+19
ROW 7	68.1	1.85E+12	2.43E+20
LONGERON	53.1	2.97E+12	3.92E+20
ROW 8	38.1	3.89E+12	5.13E+20
LONGERON	23.1	4.55E+12	6.00E+20
ROW 9	8.1	4.90E+12	6.46E+20
LONGERON	7.0	4.91E+12	6.47E+20
ROW 10	21.9	4.59E+12	6.05E+20
LONGERON	36.9	3.95E+12	5.22E+20
ROW 11	51.9	3.05E+12	4.02E+20
LONGERON	66.9	1.94E+12	2.56E+20
ROW 12	81.9	7.06E+11	9.35E+19
LONGERON	96.9	1.64E+10	2.57E+18
SPACE END	89.2	2.05E+11	2.79E+19
EARTH END	-90.8	1.37E+11	1.89E+19
CONSTANT INCIDENCE ANGLE (DEGREES)			
RAM DIR	0.0	4.95E+12	6.52E+20
SIDE DIR	90.0	1.69E+11	2.32E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.48E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 607.0 TO 1029.3 K
 ALTITUDE RANGE: 465.4 TO 475.9 KM

 *DATE: JANUARY 3, 1987 DAY OF YEAR: 3 *
 *CUMULATIVE EXPOSURE TIME: 1001 DAYS *

AVERAGES AND RANGES ARE BASED ON 1/50 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	9.47E+05	5.26E+14
LONGERON	126.9	6.79E-01	5.48E+09
ROW 2	141.9	1.40E-07	3.12E+04
LONGERON	156.9	2.88E-13	1.14E+00
ROW 3	171.9	1.52E-16	3.26E-03
LONGERON	173.1	1.43E-16	3.19E-03
ROW 4	158.1	2.47E-13	9.52E-01
LONGERON	143.1	1.14E-07	1.93E+04
ROW 5	128.1	5.24E-01	2.58E+09
LONGERON	113.1	5.93E+05	2.34E+14
ROW 6	98.1	9.25E+09	1.56E+18
LONGERON	83.1	5.77E+11	8.13E+19
ROW 7	68.1	1.74E+12	2.44E+20
LONGERON	53.1	2.80E+12	3.93E+20
ROW 8	38.1	3.67E+12	5.15E+20
LONGERON	23.1	4.29E+12	6.03E+20
ROW 9	8.1	4.62E+12	6.48E+20
LONGERON	6.9	4.63E+12	6.50E+20
ROW 10	21.9	4.32E+12	6.08E+20
LONGERON	36.9	3.73E+12	5.24E+20
ROW 11	51.9	2.87E+12	4.04E+20
LONGERON	66.9	1.83E+12	2.57E+20
ROW 12	81.9	6.64E+11	9.39E+19
LONGERON	96.9	1.49E+10	2.58E+18
SPACE END	89.2	1.92E+11	2.81E+19
EARTH END	-90.8	1.28E+11	1.90E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	4.66E+12	6.55E+20
SIDE DIR	90.0	1.58E+11	2.33E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.10E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 603.5 TO 1021.5 K
 ALTITUDE RANGE: 466.2 TO 474.0 KM

 *DATE: JANUARY 10, 1987 DAY OF YEAR: 10 *
 *CUMULATIVE EXPOSURE TIME: 1008 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.30E+06	5.27E+14
LONGERON	126.9	1.15E+00	5.48E+09
ROW 2	141.9	2.13E-07	3.12E+04
LONGERON	156.9	3.53E-13	1.14E+00
ROW 3	171.8	1.50E-16	3.26E-03
LONGERON	173.1	1.18E-16	3.19E-03
ROW 4	158.1	1.79E-13	9.52E-01
LONGERON	143.1	7.81E-08	1.93E+04
ROW 5	128.1	3.65E-01	2.58E+09
LONGERON	113.1	4.78E+05	2.34E+14
ROW 6	98.1	9.21E+09	1.57E+18
LONGERON	83.1	5.89E+11	8.16E+19
ROW 7	68.1	1.78E+12	2.45E+20
LONGERON	53.1	2.86E+12	3.95E+20
ROW 8	38.1	3.75E+12	5.18E+20
LONGERON	23.1	4.38E+12	6.05E+20
ROW 9	8.2	4.72E+12	6.51E+20
LONGERON	6.9	4.73E+12	6.53E+20
ROW 10	21.9	4.42E+12	6.10E+20
LONGERON	36.9	3.81E+12	5.26E+20
ROW 11	51.9	2.94E+12	4.06E+20
LONGERON	66.9	1.87E+12	2.58E+20
ROW 12	81.9	6.80E+11	9.43E+19
LONGERON	96.9	1.57E+10	2.59E+18
SPACE END	89.2	1.97E+11	2.82E+19
EARTH END	-90.8	1.31E+11	1.91E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	4.76E+12	6.58E+20
SIDE DIR	90.0	1.62E+11	2.34E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.24E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 604.6 TO 1016.6 K
 ALTITUDE RANGE: 465.3 TO 475.4 KM

 *DATE: JANUARY 17, 1987 DAY OF YEAR: 17 *
 *CUMULATIVE EXPOSURE TIME: 1015 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.91E+06	5.28E+14
LONGERON	126.9	2.39E+00	5.48E+09
ROW 2	141.9	5.26E-07	3.12E+04
LONGERON	156.9	8.85E-13	1.14E+00
ROW 3	171.8	3.54E-16	3.26E-03
LONGERON	173.1	2.49E-16	3.19E-03
ROW 4	158.1	3.09E-13	9.52E-01
LONGERON	143.1	1.02E-07	1.93E+04
ROW 5	128.1	3.72E-01	2.58E+09
LONGERON	113.1	4.60E+05	2.35E+14
ROW 6	98.1	9.84E+09	1.58E+18
LONGERON	83.1	6.32E+11	8.20E+19
ROW 7	68.1	1.91E+12	2.47E+20
LONGERON	53.1	3.07E+12	3.97E+20
ROW 8	38.1	4.03E+12	5.20E+20
LONGERON	23.1	4.71E+12	6.08E+20
ROW 9	8.2	5.07E+12	6.54E+20
LONGERON	6.9	5.08E+12	6.56E+20
ROW 10	21.9	4.75E+12	6.13E+20
LONGERON	36.9	4.10E+12	5.29E+20
ROW 11	51.9	3.16E+12	4.08E+20
LONGERON	66.9	2.01E+12	2.59E+20
ROW 12	81.9	7.32E+11	9.47E+19
LONGERON	96.9	1.75E+10	2.60E+18
SPACE END	89.2	2.12E+11	2.83E+19
EARTH END	-90.8	1.41E+11	1.92E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.12E+12	6.61E+20
SIDE DIR	90.0	1.74E+11	2.35E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.71E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 604.2 TO 1007.1 K
 ALTITUDE RANGE: 465.3 TO 476.4 KM

 *DATE: JANUARY 24, 1987 DAY OF YEAR: 24 *
 *CUMULATIVE EXPOSURE TIME: 1022 DAYS *

AVIRAGIS AND RANGIS ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.67E+06	5.29E+14
LONGERON	126.9	1.90E+00	5.48E+09
ROW 2	141.9	4.34E-07	3.12E+04
LONGERON	156.9	8.28E-13	1.14E+00
ROW 3	171.9	3.65E-16	3.26E-03
LONGERON	173.1	2.54E-16	3.19E-03
ROW 4	158.1	2.90E-13	9.52E-01
LONGERON	143.1	8.92E-08	1.93E+04
ROW 5	128.1	3.28E-01	2.58E+09
LONGERON	113.1	4.35E+05	2.35E+14
ROW 6	98.1	9.57E+09	1.58E+18
LONGERON	83.1	6.23E+11	8.24E+19
ROW 7	68.1	1.88E+12	2.48E+20
LONGERON	53.1	3.03E+12	3.99E+20
ROW 8	38.1	3.97E+12	5.23E+20
LONGERON	23.1	4.64E+12	6.11E+20
ROW 9	8.1	4.99E+12	6.57E+20
LONGERON	6.9	5.01E+12	6.59E+20
ROW 10	21.9	4.68E+12	6.16E+20
LONGERON	36.9	4.03E+12	5.31E+20
ROW 11	51.9	3.11E+12	4.10E+20
LONGERON	66.9	1.98E+12	2.61E+20
ROW 12	81.9	7.21E+11	9.52E+19
LONGERON	96.9	1.70E+10	2.61E+18
SPACE END	89.2	2.09E+11	2.84E+19
EARTH END	-90.8	1.39E+11	1.93E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	5.04E+12	6.64E+20
SIDE DIR	90.0	1.71E+11	2.36E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.61E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 617.3 TO 1007.4 K
 ALTITUDE RANGE: 465.3 TO 476.4 KM

 *DATE: JANUARY 31, 1987 DAY OF YEAR: 31 *
 *CUMULATIVE EXPOSURE TIME: 1029 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.07E+06	5.30E+14
LONGERON	126.9	8.47E-01	5.48E+09
ROW 2	141.9	1.45E-07	3.12E+04
LONGERON	156.9	2.21E-13	1.14E+00
ROW 3	171.9	8.40E-17	3.26E-03
LONGERON	173.0	5.83E-17	3.19E-03
ROW 4	158.1	8.34E-14	9.52E-01
LONGERON	143.1	4.04E-08	1.93E+04
ROW 5	128.1	2.42E-01	2.58E+09
LONGERON	113.1	3.93E+05	2.35E+14
ROW 6	98.1	8.28E+09	1.59E+18
LONGERON	83.1	5.54E+11	8.27E+19
ROW 7	68.1	1.68E+12	2.49E+20
LONGERON	53.1	2.70E+12	4.00E+20
ROW 8	38.1	3.55E+12	5.25E+20
LONGERON	23.1	4.15E+12	6.13E+20
ROW 9	8.1	4.46E+12	6.60E+20
LONGERON	7.0	4.48E+12	6.62E+20
ROW 10	21.9	4.18E+12	6.19E+20
LONGERON	36.9	3.61E+12	5.33E+20
ROW 11	51.9	2.78E+12	4.11E+20
LONGERON	66.9	1.77E+12	2.62E+20
ROW 12	81.9	6.46E+11	9.55E+19
LONGERON	96.9	1.47E+10	2.62E+18
SPACE END	89.2	1.85E+11	2.86E+19
EARTH END	-90.8	1.23E+11	1.93E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	4.51E+12	6.67E+20
SIDE DIR	90.0	1.52E+11	2.37E+19

AVERAGE ATOMIC OXYGEN DENSITY: 5.91E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 618.4 TO 989.8 K
 ALTITUDE RANGE: 465.3 TO 475.0 KM

 *DATE: FEBRUARY 7, 1987 DAY OF YEAR 38 *
 *CUMULATIVE EXPOSURE TIME: 1036 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	6.95E+05	5.30E+14
LONGERON	126.9	3.39E-01	5.48E+09
ROW 2	141.9	4.04E-08	3.12E+04
LONGERON	156.9	4.63E-14	1.14E+00
ROW 3	171.9	1.58E-17	3.26E-03
LONGERON	173.0	1.35E-17	3.19E-03
ROW 4	158.1	3.24E-14	9.52E-01
LONGERON	143.1	2.73E-08	1.93E+04
ROW 5	128.1	2.32E-01	2.58E+09
LONGERON	113.1	4.07E+05	2.36E+14
ROW 6	98.1	8.02E+09	1.59E+18
LONGERON	83.1	5.35E+11	8.30E+19
ROW 7	68.1	1.62E+12	2.50E+20
LONGERON	53.1	2.61E+12	4.02E+20
ROW 8	38.1	3.42E+12	5.27E+20
LONGERON	23.1	4.00E+12	6.16E+20
ROW 9	8.1	4.31E+12	6.63E+20
LONGERON	7.0	4.32E+12	6.65E+20
ROW 10	21.9	4.04E+12	6.21E+20
LONGERON	36.9	3.48E+12	5.35E+20
ROW 11	51.9	2.68E+12	4.13E+20
LONGERON	66.9	1.71E+12	2.63E+20
ROW 12	81.9	6.21E+11	9.59E+19
LONGERON	96.9	1.35E+10	2.63E+18
SPACE END	89.2	1.78E+11	2.87E+19
EARTH END	-90.8	1.18E+11	1.94E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	4.35E+12	6.70E+20
SIDE DIR	90.0	1.46E+11	2.37E+19

AVERAGE ATOMIC OXYGEN DENSITY: 5.70E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 619.5 TO 971.0 K
 ALTITUDE RANGE: 465.8 TO 474.0 KM

 *DATE: FEBRUARY 14, 1987 DAY OF YEAR: 45 *
 *CUMULATIVE EXPOSURE TIME: 1043 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	6.14E+05	5.31E+14
LONGERON	126.9	2.17E-01	5.48E+09
ROW 2	141.9	2.19E-08	3.12E+04
LONGERON	156.9	2.52E-14	1.14E+00
ROW 3	171.9	1.02E-17	3.26E-03
LONGERON	173.1	1.12E-17	3.19E-03
ROW 4	158.1	3.11E-14	9.52E-01
LONGERON	143.1	2.72E-08	1.93E+04
ROW 5	128.1	2.33E-01	2.58E+09
LONGERON	113.1	4.22E+05	2.36E+14
ROW 6	98.1	8.64E+09	1.60E+18
LONGERON	83.1	5.73E+11	8.34E+19
ROW 7	68.1	1.73E+12	2.51E+20
LONGERON	53.1	2.79E+12	4.04E+20
ROW 8	38.1	3.65E+12	5.29E+20
LONGERON	23.1	4.27E+12	6.18E+20
ROW 9	8.1	4.60E+12	6.66E+20
LONGERON	6.9	4.61E+12	6.67E+20
ROW 10	21.9	4.31E+12	6.24E+20
LONGERON	36.9	3.71E+12	5.38E+20
ROW 11	51.9	2.86E+12	4.15E+20
LONGERON	66.9	1.82E+12	2.64E+20
ROW 12	81.9	6.61E+11	9.63E+19
LONGERON	96.9	1.41E+10	2.64E+18
SPACE END	89.2	1.89E+11	2.88E+19
EARTH END	-90.8	1.26E+11	1.95E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	4.64E+12	6.72E+20
SIDE DIR	90.0	1.55E+11	2.38E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.08E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 621.1 TO 967.4 K
 ALTITUDE RANGE: 465.2 TO 475.9 KM

 *DATE: FEBRUARY 21, 1987 DAY OF YEAR: 52 *
 *CUMULATIVE EXPOSURE TIME: 1050 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.23E+06	5.32E+14
LONGERON	126.9	7.55E-01	5.48E+09
ROW 2	141.9	1.07E-07	3.12E+04
LONGERON	156.9	1.52E-13	1.14E+00
ROW 3	171.8	6.28E-17	3.26E-03
LONGERON	173.1	5.38E-17	3.19E-03
ROW 4	158.1	9.72E-14	9.52E-01
LONGERON	143.1	5.41E-08	1.93E+04
ROW 5	128.1	3.30E-01	2.58E+09
LONGERON	113.1	5.36E+05	2.36E+14
ROW 6	98.1	1.12E+10	1.60E+18
LONGERON	83.1	7.18E+11	8.38E+19
ROW 7	68.1	2.17E+12	2.52E+20
LONGERON	53.1	3.49E+12	4.06E+20
ROW 8	38.1	4.57E+12	5.32E+20
LONGERON	23.1	5.34E+12	6.22E+20
ROW 9	8.2	5.75E+12	6.69E+20
LONGERON	6.9	5.77E+12	6.71E+20
ROW 10	21.9	5.39E+12	6.27E+20
LONGERON	36.9	4.65E+12	5.40E+20
ROW 11	51.9	3.58E+12	4.17E+20
LONGERON	66.9	2.28E+12	2.65E+20
ROW 12	81.9	8.29E+11	9.68E+19
LONGERON	96.9	1.89E+10	2.65E+18
SPACE END	89.2	2.40E+11	2.89E+19
EARTH END	-90.8	1.60E+11	1.96E+19
	CONSTANT INCIDENCE ANGLE (DEGREES)		
RAM DIR	0.0	5.81E+12	6.76E+20
SIDE DIR	90.0	1.97E+11	2.40E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.61E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 634.7 TO 987.4 K
 ALTITUDE RANGE: 465.3 TO 476.2 KM

 *DATE: FEBRUARY 28, 1987 DAY OF YEAR: 59 *
 *CUMULATIVE EXPOSURE TIME: 1057 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.12E+06	5.33E+14
LONGERON	126.9	2.08E+00	5.48E+09
ROW 2	141.9	3.14E-07	3.12E+04
LONGERON	156.9	3.21E-13	1.14E+00
ROW 3	171.8	8.04E-17	3.26E-03
LONGERON	173.1	4.48E-17	3.19E-03
ROW 4	158.1	6.36E-14	9.52E-01
LONGERON	143.1	3.32E-08	1.93E+04
ROW 5	128.1	2.20E-01	2.59E+09
LONGERON	113.1	4.78E+05	2.36E+14
ROW 6	98.1	1.26E+10	1.61E+18
LONGERON	83.1	8.09E+11	8.43E+19
ROW 7	68.1	2.45E+12	2.54E+20
LONGERON	53.1	3.94E+12	4.08E+20
ROW 8	38.1	5.16E+12	5.35E+20
LONGERON	23.1	6.04E+12	6.25E+20
ROW 9	8.2	6.50E+12	6.73E+20
LONGERON	6.9	6.51E+12	6.75E+20
ROW 10	21.9	6.09E+12	6.31E+20
LONGERON	36.9	5.25E+12	5.44E+20
ROW 11	51.9	4.05E+12	4.19E+20
LONGERON	66.9	2.58E+12	2.67E+20
ROW 12	81.9	9.39E+11	9.74E+19
LONGERON	96.9	2.25E+10	2.66E+18
SPACE END	89.2	2.72E+11	2.91E+19
EARTH END	-90.8	1.81E+11	1.97E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.56E+12	6.80E+20
SIDE DIR	90.0	2.24E+11	2.41E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.60E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 650.2 TO 982.1 K
 ALTITUDE RANGE: 465.1 TO 475.9 KM

 *DATE: MARCH 7, 1987 DAY OF YEAR: 66 *
 *CUMULATIVE EXPOSURE TIME: 1064 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.52E+06	5.34E+14
LONGERON	126.9	2.61E+00	5.48E+09
ROW 2	141.9	4.41E-07	3.12E+04
LONGERON	156.9	5.18E-13	1.14E+00
ROW 3	171.9	1.42E-16	3.26E-03
LONGERON	173.1	7.84E-17	3.19E-03
ROW 4	158.1	9.97E-14	9.52E-01
LONGERON	143.1	4.47E-08	1.93E+04
ROW 5	128.1	2.65E-01	2.59E+09
LONGERON	113.1	5.60E+05	2.37E+14
ROW 6	98.1	1.43E+10	1.62E+18
LONGERON	83.1	8.99E+11	8.49E+19
ROW 7	68.1	2.71E+12	2.55E+20
LONGERON	53.1	4.37E+12	4.11E+20
ROW 8	38.1	5.73E+12	5.38E+20
LONGERON	23.1	6.70E+12	6.29E+20
ROW 9	8.1	7.21E+12	6.77E+20
LONGERON	6.9	7.23E+12	6.79E+20
ROW 10	21.9	6.76E+12	6.35E+20
LONGERON	36.9	5.82E+12	5.47E+20
ROW 11	51.9	4.49E+12	4.22E+20
LONGERON	66.9	2.86E+12	2.68E+20
ROW 12	81.9	1.04E+12	9.80E+19
LONGERON	96.9	2.54E+10	2.68E+18
SPACE END	89.2	3.04E+11	2.93E+19
EARTH END	-90.8	2.03E+11	1.98E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.28E+12	6.84E+20
SIDE DIR	90.0	2.50E+11	2.42E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.54E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 653.8 TO 975.4 K
 ALTITUDE RANGE: 465.6 TO 474.1 KM

 *DATE: MARCH 14, 1987 DAY OF YEAR: 73 *
 *CUMULATIVE EXPOSURE TIME: 1071 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.77E+06	5.35E+14
LONGERON	126.9	1.13E+00	5.48E+09
ROW 2	141.9	1.51E-07	3.12E+04
LONGERON	156.9	1.99E-13	1.14E+00
ROW 3	171.9	7.85E-17	3.26E-03
LONGERON	173.0	6.61E-17	3.19E-03
ROW 4	158.1	1.20E-13	9.52E-01
LONGERON	143.1	6.67E-08	1.93E+04
ROW 5	128.1	3.95E-01	2.59E+09
LONGERON	113.1	6.57E+05	2.37E+14
ROW 6	98.1	1.41E+10	1.63E+18
LONGERON	83.1	8.82E+11	8.54E+19
ROW 7	68.1	2.66E+12	2.57E+20
LONGERON	53.1	4.28E+12	4.13E+20
ROW 8	38.1	5.62E+12	5.42E+20
LONGERON	23.1	6.56E+12	6.33E+20
ROW 9	8.1	7.06E+12	6.82E+20
LONGERON	7.0	7.08E+12	6.83E+20
ROW 10	21.9	6.62E+12	6.39E+20
LONGERON	36.9	5.71E+12	5.51E+20
ROW 11	51.9	4.40E+12	4.25E+20
LONGERON	66.9	2.80E+12	2.70E+20
ROW 12	81.9	1.02E+12	9.86E+19
LONGERON	96.9	2.41E+10	2.69E+18
SPACE END	89.2	2.97E+11	2.94E+19
EARTH END	-90.8	1.98E+11	1.99E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.14E+12	6.89E+20
SIDE DIR	90.0	2.44E+11	2.44E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.35E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 661.2 TO 968.1 K
 ALTITUDE RANGE: 465.1 TO 474.7 KM

 *DATE: MARCH 21, 1987 DAY OF YEAR: 80 *
 *CUMULATIVE EXPOSURE TIME: 1078 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.22E+06	5.36E+14
LONGERON	126.9	4.22E-01	5.48E+09
ROW 2	141.9	3.66E-08	3.12E+04
LONGERON	156.9	4.77E-14	1.14E+00
ROW 3	171.9	2.85E-17	3.26E-03
LONGERON	173.0	4.38E-17	3.19E-03
ROW 4	158.1	1.35E-13	9.52E-01
LONGERON	143.1	1.01E-07	1.93E+04
ROW 5	128.1	6.14E-01	2.59E+09
LONGERON	113.1	7.96E+05	2.38E+14
ROW 6	98.1	1.36E+10	1.64E+18
LONGERON	83.1	8.44E+11	8.59E+19
ROW 7	68.1	2.55E+12	2.58E+20
LONGERON	53.1	4.10E+12	4.16E+20
ROW 8	38.1	5.37E+12	5.45E+20
LONGERON	23.1	6.27E+12	6.37E+20
ROW 9	8.1	6.75E+12	6.86E+20
LONGERON	7.0	6.77E+12	6.88E+20
ROW 10	21.9	6.33E+12	6.43E+20
LONGERON	36.9	5.45E+12	5.54E+20
ROW 11	51.9	4.21E+12	4.27E+20
LONGERON	66.9	2.67E+12	2.72E+20
ROW 12	81.9	9.73E+11	9.92E+19
LONGERON	96.9	2.24E+10	2.71E+18
SPACE END	89.2	2.82E+11	2.96E+19
EARTH END	-90.8	1.88E+11	2.00E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	6.82E+12	6.93E+20
SIDE DIR	90.0	2.32E+11	2.45E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.94E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 661.8 TO 940.0 K
 ALTITUDE RANGE: 465.0 TO 476.0 KM

 *DATE: MARCH 28, 1987 DAY OF YEAR: 87 *
 *CUMULATIVE EXPOSURE TIME: 1085 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGRFES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.39E+06	5.37E+14
LONGERON	126.9	5.22E-01	5.48E+09
ROW 2	141.9	5.51E-08	3.12E+04
LONGERON	156.9	9.42E-14	1.14E+00
ROW 3	171.9	6.40E-17	3.26E-03
LONGERON	173.0	9.35E-17	3.19E-03
ROW 4	158.1	2.49E-13	9.52E-01
LONGERON	143.1	1.58E-07	1.93E+04
ROW 5	128.1	8.30E-01	2.59E+09
LONGERON	113.1	9.57E+05	2.38E+14
ROW 6	98.1	1.48E+10	1.65E+18
LONGERON	83.1	8.98E+11	8.64E+19
ROW 7	68.1	2.71E+12	2.60E+20
LONGERON	53.1	4.36E+12	4.18E+20
ROW 8	38.1	5.72E+12	5.48E+20
LONGERON	23.1	6.68E+12	6.41E+20
ROW 9	8.1	7.19E+12	6.90E+20
LONGERON	7.0	7.21E+12	6.92E+20
ROW 10	21.9	6.74E+12	6.47E+20
LONGERON	36.9	5.81E+12	5.57E+20
ROW 11	51.9	4.48E+12	4.30E+20
LONGERON	66.9	2.85E+12	2.73E+20
ROW 12	81.9	1.04E+12	9.98E+19
LONGERON	96.9	2.43E+10	2.72E+18
SPACE END	89.2	3.02E+11	2.98E+19
EARTH END	-90.8	2.02E+11	2.02E+19

CONSTANT
INCIDENCE ANGLE
(DEGRFES)

RAM DIR	0.0	7.26E+12	6.97E+20
SIDE DIR	90.0	2.49E+11	2.47E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.51E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 669.2 TO 940.6 K
 ALTITUDE RANGE: 464.9 TO 476.0 KM

 *DATE: APRIL 4, 1987 DAY OF YEAR: 94 *
 *CUMULATIVE EXPOSURE TIME: 1092 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.15E+06	5.38E+14
LONGERON	126.9	1.75E+00	5.49E+09
ROW 2	141.9	3.80E-07	3.12E+04
LONGERON	156.9	7.75E-13	1.14E+00
ROW 3	171.9	3.75E-16	3.26E-03
LONGERON	173.1	3.05E-16	3.19E-03
ROW 4	158.1	4.50E-13	9.52E-01
LONGERON	143.1	1.86E-07	1.93E+04
ROW 5	128.1	8.20E-01	2.59E+09
LONGERON	113.1	9.89E+05	2.39E+14
ROW 6	98.1	1.64E+10	1.65E+18
LONGERON	83.1	9.84E+11	8.70E+19
ROW 7	68.1	2.97E+12	2.62E+20
LONGERON	53.1	4.78E+12	4.21E+20
ROW 8	38.1	6.27E+12	5.52E+20
LONGERON	23.1	7.33E+12	6.45E+20
ROW 9	8.1	7.89E+12	6.95E+20
LONGERON	6.9	7.91E+12	6.97E+20
ROW 10	21.9	7.39E+12	6.51E+20
LONGERON	36.9	6.37E+12	5.61E+20
ROW 11	51.9	4.92E+12	4.33E+20
LONGERON	66.9	3.13E+12	2.75E+20
ROW 12	81.9	1.14E+12	1.01E+20
LONGERON	96.9	2.77E+10	2.74E+18
SPACE END	89.2	3.33E+11	3.00E+19
EARTH END	-90.8	2.23E+11	2.03E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	7.97E+12	7.02E+20
SIDE DIR	90.0	2.75E+11	2.48E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.04E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 673.5 TO 942.7 K
 ALTITUDE RANGE: 464.9 TO 475.0 KM

 *DATE: APRIL 11, 1987 DAY OF YEAR: 101 *
 *CUMULATIVE EXPOSURE TIME: 1099 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	6.00E+06	5.42E+14
LONGERON	126.9	1.54E+01	5.49E+09
ROW 2	141.9	8.18E-06	3.12E+04
LONGERON	156.9	2.49E-11	1.14E+00
ROW 3	171.8	1.04E-14	3.26E-03
LONGERON	173.1	4.57E-15	3.19E-03
ROW 4	158.1	2.87E-12	9.52E-01
LONGERON	143.1	5.35E-07	1.93E+04
ROW 5	128.1	1.43E+00	2.59E+09
LONGERON	113.1	1.51E+06	2.40E+14
ROW 6	98.1	2.28E+10	1.67E+18
LONGERON	83.1	1.26E+12	8.78E+19
ROW 7	68.1	3.81E+12	2.64E+20
LONGERON	53.1	6.13E+12	4.25E+20
ROW 8	38.1	8.03E+12	5.57E+20
LONGERON	23.1	9.39E+12	6.51E+20
ROW 9	8.2	1.01E+13	7.01E+20
LONGERON	6.9	1.01E+13	7.03E+20
ROW 10	21.9	9.48E+12	6.57E+20
LONGERON	36.9	8.17E+12	5.66E+20
ROW 11	51.9	6.30E+12	4.37E+20
LONGERON	66.9	4.01E+12	2.78E+20
ROW 12	81.9	1.47E+12	1.01E+20
LONGERON	96.9	3.96E+10	2.76E+18
SPACE END	89.2	4.35E+11	3.03E+19
EARTH END	-90.8	2.94E+11	2.05E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.02E+13	7.08E+20
SIDE DIR	90.0	3.60E+11	2.51E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.34E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 687.4 TO 996.0 K
 ALTITUDE RANGE: 465.6 TO 473.4 KM

 *DATE: APRIL 18, 1987 DAY OF YEAR: 108 *
 *CUMULATIVE EXPOSURE TIME: 1106 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	7.52E+06	5.47E+14
LONGERON	126.9	2.11E+01	5.51E+09
ROW 2	141.9	1.12E-05	3.12E+04
LONGERON	156.9	3.46E-11	1.14E+00
ROW 3	171.8	1.54E-14	3.26E-03
LONGERON	173.1	7.41E-15	3.19E-03
ROW 4	158.1	4.71E-12	9.52E-01
LONGERON	143.1	7.68E-07	1.93E+04
ROW 5	128.1	1.69E+00	2.59E+09
LONGERON	113.1	1.68E+06	2.41E+14
ROW 6	98.1	2.49E+10	1.68E+18
LONGERON	83.1	1.35E+12	8.86E+19
ROW 7	68.1	4.06E+12	2.67E+20
LONGERON	53.1	6.54E+12	4.29E+20
ROW 8	38.1	8.57E+12	5.62E+20
LONGERON	23.1	1.00E+13	6.57E+20
ROW 9	8.2	1.08E+13	7.07E+20
LONGERON	6.9	1.08E+13	7.09E+20
ROW 10	21.9	1.01E+13	6.63E+20
LONGERON	36.9	8.71E+12	5.71E+20
ROW 11	51.9	6.73E+12	4.41E+20
LONGERON	66.9	4.28E+12	2.80E+20
ROW 12	81.9	1.56E+12	1.02E+20
LONGERON	96.9	4.34E+10	2.79E+18
SPACE END	89.2	4.67E+11	3.05E+19
EARTH END	-90.8	3.15E+11	2.07E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	1.09E+13	7.15E+20
SIDE DIR	90.0	3.86E+11	2.53E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.43E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 699.1 TO 999.9 K
 ALTITUDE RANGE: 464.7 TO 475.2 KM

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*DATE:      APRIL 25, 1987      DAY OF YEAR: 115 *
*CUMULATIVE EXPOSURE TIME: 1113 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.59E+06	5.49E+14
LONGERON	126.9	4.85E+00	5.51E+09
ROW 2	141.9	1.39E-06	3.12E+04
LONGERON	156.9	3.49E-12	1.14E+00
ROW 3	171.9	1.99E-15	3.26E-03
LONGERON	173.1	1.60E-15	3.19E-03
ROW 4	158.1	1.78E-12	9.52E-01
LONGERON	143.1	4.56E-07	1.93E+04
ROW 5	128.1	1.22E+00	2.59E+09
LONGERON	113.1	1.15E+06	2.41E+14
ROW 6	98.1	1.86E+10	1.70E+18
LONGERON	83.1	1.08E+12	8.93E+19
ROW 7	68.1	3.25E+12	2.68E+20
LONGERON	53.1	5.23E+12	4.32E+20
ROW 8	38.1	6.85E+12	5.66E+20
LONGERON	23.1	8.01E+12	6.62E+20
ROW 9	8.1	8.62E+12	7.13E+20
LONGERON	6.9	8.65E+12	7.15E+20
ROW 10	21.9	8.08E+12	6.68E+20
LONGERON	36.9	6.96E+12	5.76E+20
ROW 11	51.9	5.37E+12	4.44E+20
LONGERON	66.9	3.42E+12	2.82E+20
ROW 12	81.9	1.25E+12	1.03E+20
LONGERON	96.9	3.18E+10	2.81E+18
SPACE END	89.2	3.68E+11	3.08E+19
EARTH END	-90.8	2.47E+11	2.08E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	8.71E+12	7.20E+20
SIDE DIR	90.0	3.03E+11	2.55E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.14E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 673.6 TO 982.8 K
 ALTITUDE RANGE: 464.7 TO 475.7 KM

 *DATE: MAY 2, 1987 DAY OF YEAR: 122 *
 *CUMULATIVE EXPOSURE TIME: 1120 DAYS *

AVRAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.91E+06	5.50E+14
LONGERON	126.9	1.26E+00	5.51E+09
ROW 2	141.9	2.37E-07	3.12E+04
LONGERON	156.9	6.04E-13	1.14E+00
ROW 3	171.9	4.92E-16	3.26E-03
LONGERON	173.0	6.90E-16	3.19E-03
ROW 4	158.1	1.38E-12	9.52E-01
LONGERON	143.1	5.45E-07	1.93E+04
ROW 5	128.1	1.68E+00	2.59E+09
LONGERON	113.1	1.26E+06	2.42E+14
ROW 6	98.1	1.62E+10	1.70E+18
LONGERON	83.1	9.40E+11	8.98E+19
ROW 7	68.1	2.82E+12	2.70E+20
LONGERON	53.1	4.54E+12	4.35E+20
ROW 8	38.1	5.95E+12	5.70E+20
LONGERON	23.1	6.95E+12	6.66E+20
ROW 9	8.1	7.48E+12	7.17E+20
LONGERON	7.0	7.50E+12	7.19E+20
ROW 10	21.9	7.01E+12	6.72E+20
LONGERON	36.9	6.04E+12	5.79E+20
ROW 11	51.9	4.66E+12	4.47E+20
LONGERON	66.9	2.96E+12	2.84E+20
ROW 12	81.9	1.08E+12	1.04E+20
LONGERON	96.9	2.59E+10	2.82E+18
SPACE END	89.2	3.17E+11	3.10E+19
EARTH END	-90.8	2.12E+11	2.09E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	7.56E+12	7.25E+20
SIDE DIR	90.0	2.61E+11	2.56E+19

AVRAGE ATOMIC OXYGEN DENSITY: 9.90E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 665.5 TO 972.0 K
 ALTITUDE RANGE: 464.6 TO 475.6 KM

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*DATE:      MAY   9, 1987      DAY OF YEAR:  129 *
*CUMULATIVE EXPOSURE TIME: 1127 DAYS              *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.27E+06	5.51E+14
LONGERON	126.9	1.82E+00	5.51E+09
ROW 2	141.9	4.50E-07	3.12E+04
LONGERON	156.9	1.42E-12	1.14E+00
ROW 3	171.9	1.31E-15	3.26E-03
LONGERON	173.0	1.86E-15	3.19E-03
ROW 4	158.1	3.41E-12	9.52E-01
LONGERON	143.1	1.15E-06	1.93E+04
ROW 5	128.1	2.94E+00	2.59E+09
LONGERON	113.1	1.75E+06	2.43E+14
ROW 6	98.1	1.78E+10	1.72E+18
LONGERON	83.1	9.79E+11	9.04E+19
ROW 7	68.1	2.94E+12	2.72E+20
LONGERON	53.1	4.73E+12	4.38E+20
ROW 8	38.1	6.20E+12	5.74E+20
LONGERON	23.1	7.24E+12	6.71E+20
ROW 9	8.1	7.80E+12	7.22E+20
LONGERON	7.0	7.82E+12	7.24E+20
ROW 10	21.9	7.30E+12	6.77E+20
LONGERON	36.9	6.29E+12	5.83E+20
ROW 11	51.9	4.85E+12	4.50E+20
LONGERON	66.9	3.08E+12	2.86E+20
ROW 12	81.9	1.12E+12	1.04E+20
LONGERON	96.9	2.78E+10	2.84E+18
SPACE END	89.2	3.32E+11	3.12E+19
EARTH END	-90.8	2.23E+11	2.11E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.88E+12	7.29E+20
SIDE DIR	90.0	2.74E+11	2.58E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.03E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 671.8 TO 991.1 K
 ALTITUDE RANGE: 464.8 TO 473.9 KM

 *DATE: MAY 16, 1987 DAY OF YEAR: 136 *
 *CUMULATIVE EXPOSURE TIME: 1134 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.11E+06	5.53E+14
LONGERON	126.9	4.19E+00	5.51E+09
ROW 2	141.9	1.61E-06	3.12E+04
LONGERON	156.9	5.68E-12	1.14E+00
ROW 3	171.9	4.28E-15	3.26E-03
LONGERON	173.1	4.24E-15	3.19E-03
ROW 4	158.1	5.39E-12	9.52E-01
LONGERON	143.1	1.39E-06	1.93E+04
ROW 5	128.1	3.14E+00	2.59E+09
LONGERON	113.1	1.81E+06	2.44E+14
ROW 6	98.1	1.82E+10	1.73E+18
LONGERON	83.1	9.94E+11	9.10E+19
ROW 7	68.1	2.99E+12	2.74E+20
LONGERON	53.1	4.82E+12	4.41E+20
ROW 8	38.1	6.32E+12	5.78E+20
LONGERON	23.1	7.38E+12	6.75E+20
ROW 9	8.1	7.95E+12	7.27E+20
LONGERON	6.9	7.97E+12	7.29E+20
ROW 10	21.9	7.45E+12	6.81E+20
LONGERON	36.9	6.42E+12	5.87E+20
ROW 11	51.9	4.95E+12	4.53E+20
LONGERON	66.9	3.15E+12	2.88E+20
ROW 12	81.9	1.15E+12	1.05E+20
LONGERON	96.9	2.98E+10	2.86E+18
SPACE END	89.2	3.40E+11	3.14E+19
EARTH END	-90.8	2.29E+11	2.12E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	8.03E+12	7.34E+20
SIDE DIR	90.0	2.81E+11	2.60E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.05E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 669.2 TO 995.5 K
 ALTITUDE RANGE: 464.7 TO 473.8 KM

 *DATE: MAY 23, 1987 DAY OF YEAR: 143 *
 *CUMULATIVE EXPOSURE TIME: 1141 DAYS *

AVERAGES AND RANGES ARE BASED ON 1751 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	6.20E+06	5.57E+14
LONGERON	126.9	1.80E+01	5.53E+09
ROW 2	141.9	1.24E-05	3.12E+04
LONGERON	156.9	5.28E-11	1.14E+00
ROW 3	171.8	3.08E-14	3.26E-03
LONGERON	173.1	1.75E-14	3.19E-03
ROW 4	158.1	1.20E-11	9.52E-01
LONGERON	143.1	1.97E-06	1.93E+04
ROW 5	128.1	3.61E+00	2.60E+09
LONGERON	113.1	2.11E+06	2.46E+14
ROW 6	98.1	2.20E+10	1.74E+18
LONGERON	83.1	1.16E+12	9.17E+19
ROW 7	68.1	3.48E+12	2.76E+20
LONGERON	53.1	5.61E+12	4.44E+20
ROW 8	38.1	7.36E+12	5.82E+20
LONGERON	23.1	8.60E+12	6.80E+20
ROW 9	8.2	9.26E+12	7.32E+20
LONGERON	6.9	9.29E+12	7.34E+20
ROW 10	21.9	8.68E+12	6.86E+20
LONGERON	36.9	7.48E+12	5.91E+20
ROW 11	51.9	5.78E+12	4.56E+20
LONGERON	66.9	3.67E+12	2.90E+20
ROW 12	81.9	1.35E+12	1.06E+20
LONGERON	96.9	3.77E+10	2.88E+18
SPACE END	89.2	4.02E+11	3.16E+19
EARTH END	-90.8	2.73E+11	2.14E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	9.36E+12	7.40E+20
SIDE DIR	90.0	3.33E+11	2.62E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.23E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 687.2 TO 1051.5 K
 ALTITUDE RANGE: 464.5 TO 474.8 KM

 *DATE: MAY 30, 1987 DAY OF YEAR: 150 *
 *CUMULATIVE EXPOSURE TIME: 1148 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	6.85E+06	5.61E+14
LONGERON	126.9	2.01E+01	5.54E+09
ROW 2	141.9	1.20E-05	3.12E+04
LONGERON	156.9	4.30E-11	1.14E+00
ROW 3	171.8	2.16E-14	3.26E-03
LONGERON	173.1	1.08E-14	3.19E-03
ROW 4	158.1	6.68E-12	9.52E-01
LONGERON	143.1	1.04E-06	1.93E+04
ROW 5	128.1	2.08E+00	2.60E+09
LONGERON	113.1	1.66E+06	2.47E+14
ROW 6	98.1	2.15E+10	1.75E+18
LONGERON	83.1	1.14E+12	9.24E+19
ROW 7	68.1	3.43E+12	2.78E+20
LONGERON	53.1	5.53E+12	4.47E+20
ROW 8	38.1	7.25E+12	5.86E+20
LONGERON	23.1	8.48E+12	6.85E+20
ROW 9	8.2	9.13E+12	7.38E+20
LONGERON	6.9	9.15E+12	7.40E+20
ROW 10	21.9	8.55E+12	6.91E+20
LONGERON	36.9	7.37E+12	5.96E+20
ROW 11	51.9	5.69E+12	4.60E+20
LONGERON	66.9	3.62E+12	2.92E+20
ROW 12	81.9	1.33E+12	1.07E+20
LONGERON	96.9	3.75E+10	2.90E+18
SPACE END	89.2	3.96E+11	3.18E+19
EARTH END	-90.8	2.69E+11	2.15E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	9.22E+12	7.45E+20
SIDE DIR	90.0	3.29E+11	2.64E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.21E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 675.7 TO 1052.0 K
 ALTITUDE RANGE: 464.6 TO 474.8 KM

 *DATE: JUNE 6, 1987 DAY OF YEAR: 157 *
 *CUMULATIVE EXPOSURE TIME: 1155 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.91E+06	5.63E+14
LONGERON	126.9	6.44E+00	5.54E+09
ROW 2	141.9	1.93E-06	3.12E+04
LONGERON	156.9	4.41E-12	1.14E+00
ROW 3	171.8	2.13E-15	3.26E-03
LONGERON	173.1	1.44E-15	3.19E-03
ROW 4	158.1	1.41E-12	9.52E-01
LONGERON	143.1	3.38E-07	1.93E+04
ROW 5	128.1	9.42E-01	2.60E+09
LONGERON	113.1	9.93E+05	2.47E+14
ROW 6	98.1	1.62E+10	1.76E+18
LONGERON	83.1	9.20E+11	9.30E+19
ROW 7	68.1	2.77E+12	2.80E+20
LONGERON	53.1	4.47E+12	4.50E+20
ROW 8	38.1	5.86E+12	5.90E+20
LONGERON	23.1	6.85E+12	6.90E+20
ROW 9	8.2	7.37E+12	7.42E+20
LONGERON	6.9	7.39E+12	7.44E+20
ROW 10	21.9	6.91E+12	6.96E+20
LONGERON	36.9	5.95E+12	6.00E+20
ROW 11	51.9	4.60E+12	4.63E+20
LONGERON	66.9	2.92E+12	2.94E+20
ROW 12	81.9	1.07E+12	1.07E+20
LONGERON	96.9	2.83E+10	2.92E+18
SPACE END	89.2	3.16E+11	3.20E+19
EARTH END	-90.8	2.12E+11	2.17E+19
	CONSTANT INCIDENCE ANGLE (DEGREES)		
RAM DIR	0.0	7.45E+12	7.50E+20
SIDE DIR	90.0	2.61E+11	2.65E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.75E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 663.8 TO 1031.3 K
 ALTITUDE RANGE: 464.6 TO 474.1 KM

 *DATE: JUNE 13, 1987 DAY OF YEAR: 164 *
 *CUMULATIVE EXPOSURE TIME: 1162 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.27E+06	5.65E+14
LONGERON	126.9	2.26E+00	5.54E+09
ROW 2	141.9	4.86E-07	3.12E+04
LONGERON	156.9	1.07E-12	1.14E+00
ROW 3	171.9	6.77E-16	3.26E-03
LONGERON	173.0	7.35E-16	3.19E-03
ROW 4	158.1	1.20E-12	9.52E-01
LONGERON	143.1	4.12E-07	1.93E+04
ROW 5	128.1	1.23E+00	2.60E+09
LONGERON	113.1	1.01E+06	2.48E+14
ROW 6	98.1	1.40E+10	1.77E+18
LONGERON	83.1	8.07E+11	9.35E+19
ROW 7	68.1	2.43E+12	2.81E+20
LONGERON	53.1	3.91E+12	4.53E+20
ROW 8	38.1	5.12E+12	5.93E+20
LONGERON	23.1	5.98E+12	6.93E+20
ROW 9	8.1	6.44E+12	7.46E+20
LONGERON	7.0	6.46E+12	7.48E+20
ROW 10	21.9	6.03E+12	6.99E+20
LONGERON	36.9	5.20E+12	6.03E+20
ROW 11	51.9	4.01E+12	4.65E+20
LONGERON	66.9	2.55E+12	2.96E+20
ROW 12	81.9	9.28E+11	1.08E+20
LONGERON	96.9	2.32E+10	2.93E+18
SPACE END	89.2	2.74E+11	3.22E+19
EARTH END	-90.8	1.84E+11	2.18E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	6.50E+12	7.54E+20
SIDE DIR	90.0	2.26E+11	2.67E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.52E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 661.1 TO 1005.8 K
 ALTITUDE RANGE: 465.1 TO 472.9 KM

 *DATE: JUNE 20, 1987 DAY OF YEAR: 171 *
 *CUMULATIVE EXPOSURE TIME: 1169 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.65E+06	5.66E+14
LONGERON	126.9	1.25E+00	5.54E+09
ROW 2	141.9	2.59E-07	3.12E+04
LONGERON	156.9	6.37E-13	1.14E+00
ROW 3	171.9	4.91E-16	3.26E-03
LONGERON	173.0	6.78E-16	3.19E-03
ROW 4	158.1	1.38E-12	9.52E-01
LONGERON	143.1	5.60E-07	1.93E+04
ROW 5	128.1	1.74E+00	2.60E+09
LONGERON	113.1	1.23E+06	2.49E+14
ROW 6	98.1	1.38E+10	1.78E+18
LONGERON	83.1	7.71E+11	9.39E+19
ROW 7	68.1	2.31E+12	2.82E+20
LONGERON	53.1	3.72E+12	4.55E+20
ROW 8	38.1	4.87E+12	5.96E+20
LONGERON	23.1	5.69E+12	6.97E+20
ROW 9	8.1	6.12E+12	7.50E+20
LONGERON	7.0	6.14E+12	7.52E+20
ROW 10	21.9	5.73E+12	7.03E+20
LONGERON	36.9	4.94E+12	6.06E+20
ROW 11	51.9	3.81E+12	4.67E+20
LONGERON	66.9	2.42E+12	2.97E+20
ROW 12	81.9	8.78E+11	1.08E+20
LONGERON	96.9	2.13E+10	2.95E+18
SPACE END	89.2	2.60E+11	3.24E+19
EARTH END	-90.8	1.75E+11	2.19E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.18E+12	7.58E+20
SIDE DIR	90.0	2.14E+11	2.68E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.09E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 663.4 TO 1004.8 K
 ALTITUDE RANGE: 464.5 TO 474.1 KM

 *DATE: JUNE 27, 1987 DAY OF YEAR: 178 *
 *CUMULATIVE EXPOSURE TIME: 1176 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.47E+06	5.67E+14
LONGERON	126.9	1.03E+00	5.54E+09
ROW 2	141.9	1.93E-07	3.12E+04
LONGERON	156.9	4.21E-13	1.14E+00
ROW 3	171.9	2.94E-16	3.26E-03
LONGERON	173.0	3.85E-16	3.19E-03
ROW 4	158.1	8.01E-13	9.52E-01
LONGERON	143.1	3.59E-07	1.93E+04
ROW 5	128.1	1.32E+00	2.60E+09
LONGERON	113.1	1.06E+06	2.49E+14
ROW 6	98.1	1.25E+10	1.79E+18
LONGERON	83.1	7.10E+11	9.44E+19
ROW 7	68.1	2.14E+12	2.84E+20
LONGERON	53.1	3.44E+12	4.57E+20
ROW 8	38.1	4.50E+12	5.99E+20
LONGERON	23.1	5.26E+12	7.00E+20
ROW 9	8.1	5.66E+12	7.53E+20
LONGERON	7.0	5.68E+12	7.55E+20
ROW 10	21.9	5.30E+12	7.06E+20
LONGERON	36.9	4.57E+12	6.08E+20
ROW 11	51.9	3.53E+12	4.69E+20
LONGERON	66.9	2.24E+12	2.99E+20
ROW 12	81.9	8.15E+11	1.09E+20
LONGERON	96.9	1.97E+10	2.96E+18
SPACE END	89.2	2.39E+11	3.25E+19
EARTH END	-90.8	1.61E+11	2.20E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	5.72E+12	7.61E+20
SIDE DIR	90.0	1.98E+11	2.69E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.49E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 653.0 TO 990.5 K
 ALTITUDE RANGE: 464.5 TO 474.5 KM

 *DATE: JULY 4, 1987 DAY OF YEAR: 185 *
 *CUMULATIVE EXPOSURE TIME: 1183 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.39E+06	5.67E+14
LONGERON	126.9	1.17E+00	5.54E+09
ROW 2	141.9	2.14E-07	3.12E+04
LONGERON	156.9	3.38E-13	1.14E+00
ROW 3	171.9	1.43E-16	3.26E-03
LONGERON	173.1	1.21E-16	3.19E-03
ROW 4	158.1	2.05E-13	9.52E-01
LONGERON	143.1	9.99E-08	1.93E+04
ROW 5	128.1	5.05E-01	2.60E+09
LONGERON	113.1	6.22E+05	2.50E+14
ROW 6	98.1	1.01E+10	1.79E+18
LONGERON	83.1	6.26E+11	9.47E+19
ROW 7	68.1	1.89E+12	2.85E+20
LONGERON	53.1	3.05E+12	4.59E+20
ROW 8	38.1	4.00E+12	6.01E+20
LONGERON	23.1	4.68E+12	7.03E+20
ROW 9	8.1	5.03E+12	7.56E+20
LONGERON	6.9	5.05E+12	7.58E+20
ROW 10	21.9	4.72E+12	7.09E+20
LONGERON	36.9	4.07E+12	6.11E+20
ROW 11	51.9	3.14E+12	4.71E+20
LONGERON	66.9	2.00E+12	3.00E+20
ROW 12	81.9	7.29E+11	1.09E+20
LONGERON	96.9	1.75E+10	2.97E+18
SPACE END	89.2	2.11E+11	3.26E+19
EARTH END	-90.8	1.41E+11	2.21E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.09E+12	7.64E+20
SIDE DIR	90.0	1.74E+11	2.70E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.67E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 636.3 TO 958.5 K
 ALTITUDE RANGE: 464.4 TO 474.4 KM

 *DATE: JULY 11, 1987 DAY OF YEAR: 192 *
 *CUMULATIVE EXPOSURE TIME: 1190 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.03E+06	5.69E+14
LONGERON	126.9	2.66E+00	5.55E+09
ROW 2	141.9	6.21E-07	3.12E+04
LONGERON	156.9	9.20E-13	1.14E+00
ROW 3	171.8	2.58E-16	3.26E-03
LONGERON	173.1	1.20E-16	3.19E-03
ROW 4	158.1	1.21E-13	9.52E-01
LONGERON	143.1	4.72E-08	1.93E+04
ROW 5	128.1	2.68E-01	2.60E+09
LONGERON	113.1	4.85E+05	2.50E+14
ROW 6	98.1	1.06E+10	1.80E+18
LONGERON	83.1	6.65E+11	9.51E+19
ROW 7	68.1	2.01E+12	2.86E+20
LONGERON	53.1	3.24E+12	4.61E+20
ROW 8	38.1	4.25E+12	6.04E+20
LONGERON	23.1	4.97E+12	7.06E+20
ROW 9	8.2	5.35E+12	7.60E+20
LONGERON	6.9	5.37E+12	7.62E+20
ROW 10	21.9	5.02E+12	7.12E+20
LONGERON	36.9	4.32E+12	6.14E+20
ROW 11	51.9	3.34E+12	4.73E+20
LONGERON	66.9	2.12E+12	3.01E+20
ROW 12	81.9	7.76E+11	1.10E+20
LONGERON	96.9	1.91E+10	2.98E+18
SPACE END	89.2	2.25E+11	3.28E+19
EARTH END	-90.8	1.51E+11	2.22E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.41E+12	7.67E+20
SIDE DIR	90.0	1.86E+11	2.71E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.08E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 635.5 TO 969.8 K
 ALTITUDE RANGE: 464.6 TO 473.4 KM

 *DATE: JULY 18, 1987 DAY OF YEAR: 199 *
 *CUMULATIVE EXPOSURE TIME: 1197 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.74E+06	5.71E+14
LONGERON	126.9	6.76E+00	5.55E+09
ROW 2	141.9	2.12E-06	3.12E+04
LONGERON	156.9	4.43E-12	1.14E+00
ROW 3	171.8	1.80E-15	3.26E-03
LONGERON	173.1	1.03E-15	3.19E-03
ROW 4	158.1	8.94E-13	9.52E-01
LONGERON	143.1	2.06E-07	1.93E+04
ROW 5	128.1	6.36E-01	2.60E+09
LONGERON	113.1	8.24E+05	2.50E+14
ROW 6	98.1	1.48E+10	1.81E+18
LONGERON	83.1	8.50E+11	9.57E+19
ROW 7	68.1	2.57E+12	2.88E+20
LONGERON	53.1	4.13E+12	4.63E+20
ROW 8	38.1	5.42E+12	6.07E+20
LONGERON	23.1	6.33E+12	7.10E+20
ROW 9	8.2	6.82E+12	7.64E+20
LONGERON	6.9	6.84E+12	7.66E+20
ROW 10	21.9	6.39E+12	7.16E+20
LONGERON	36.9	5.51E+12	6.17E+20
ROW 11	51.9	4.25E+12	4.76E+20
LONGERON	66.9	2.70E+12	3.03E+20
ROW 12	81.9	9.88E+11	1.11E+20
LONGERON	96.9	2.63E+10	3.00E+18
SPACE END	89.2	2.92E+11	3.29E+19
EARTH END	-90.8	1.96E+11	2.23E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.89E+12	7.72E+20
SIDE DIR	90.0	2.41E+11	2.73E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.02E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 657.0 TO 1028.5 K
 ALTITUDE RANGE: 464.5 TO 473.2 KM

 *DATE: JULY 25, 1987 DAY OF YEAR: 206 *
 *CUMULATIVE EXPOSURE TIME: 1204 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	5.31E+06	5.74E+14
LONGERON	126.9	1.13E+01	5.56E+09
ROW 2	141.9	4.99E-06	3.12E+04
LONGERON	156.9	1.77E-11	1.14E+00
ROW 3	171.9	1.27E-14	3.26E-03
LONGERON	173.1	1.10E-14	3.19E-03
ROW 4	158.1	1.04E-11	9.52E-01
LONGERON	143.1	1.79E-06	1.93E+04
ROW 5	128.1	2.85E+00	2.60E+09
LONGERON	113.1	1.68E+06	2.51E+14
ROW 6	98.1	1.96E+10	1.82E+18
LONGERON	83.1	1.04E+12	9.63E+19
ROW 7	68.1	3.13E+12	2.90E+20
LONGERON	53.1	5.03E+12	4.66E+20
ROW 8	38.1	6.60E+12	6.11E+20
LONGERON	23.1	7.71E+12	7.14E+20
ROW 9	8.1	8.30E+12	7.69E+20
LONGERON	6.9	8.33E+12	7.71E+20
ROW 10	21.9	7.78E+12	7.20E+20
LONGERON	36.9	6.71E+12	6.21E+20
ROW 11	51.9	5.18E+12	4.79E+20
LONGERON	66.9	3.29E+12	3.05E+20
ROW 12	81.9	1.20E+12	1.11E+20
LONGERON	96.9	3.35E+10	3.02E+18
SPACE END	89.2	3.60E+11	3.32E+19
EARTH END	-90.8	2.44E+11	2.24E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	8.39E+12	7.77E+20
SIDE DIR	90.0	2.99E+11	2.75E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.10E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 678.8 TO 1060.4 K
 ALTITUDE RANGE: 464.3 TO 474.2 KM

 *DATE: AUGUST 1, 1987 DAY OF YEAR: 213 *
 *CUMULATIVE EXPOSURE TIME: 1211 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.85E+06	5.76E+14
LONGERON	126.9	5.72E+00	5.56E+09
ROW 2	141.9	2.32E-06	3.12E+04
LONGERON	156.9	9.30E-12	1.14E+00
ROW 3	171.9	8.33E-15	3.26E-03
LONGERON	173.0	9.34E-15	3.19E-03
ROW 4	158.1	1.16E-11	9.52E-01
LONGERON	143.1	2.46E-06	1.93E+04
ROW 5	128.1	4.20E+00	2.61E+09
LONGERON	113.1	2.07E+06	2.53E+14
ROW 6	98.1	1.99E+10	1.83E+18
LONGERON	83.1	1.03E+12	9.69E+19
ROW 7	68.1	3.10E+12	2.91E+20
LONGERON	53.1	4.99E+12	4.69E+20
ROW 8	38.1	6.54E+12	6.15E+20
LONGERON	23.1	7.64E+12	7.19E+20
ROW 9	8.1	8.23E+12	7.74E+20
LONGERON	7.0	8.25E+12	7.76E+20
ROW 10	21.9	7.71E+12	7.25E+20
LONGERON	36.9	6.64E+12	6.25E+20
ROW 11	51.9	5.12E+12	4.82E+20
LONGERON	66.9	3.26E+12	3.07E+20
ROW 12	81.9	1.19E+12	1.12E+20
LONGERON	96.9	3.19E+10	3.04E+18
SPACE END	89.2	3.56E+11	3.34E+19
EARTH END	-90.8	2.41E+11	2.26E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	8.31E+12	7.82E+20
SIDE DIR	90.0	2.95E+11	2.76E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.09E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 689.2 TO 1068.5 K
 ALTITUDE RANGE: 464.2 TO 474.3 KM

 *DATE: AUGUST 8, 1987 DAY OF YEAR: 220 *
 *CUMULATIVE EXPOSURE TIME: 1218 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.11E+06	5.78E+14
LONGERON	126.9	1.68E+00	5.56E+09
ROW 2	141.9	3.89E-07	3.12E+04
LONGERON	156.9	1.09E-12	1.14E+00
ROW 3	171.9	9.07E-16	3.26E-03
LONGERON	173.0	1.26E-15	3.19E-03
ROW 4	158.1	2.43E-12	9.52E-01
LONGERON	143.1	8.89E-07	1.93E+04
ROW 5	128.1	2.46E+00	2.61E+09
LONGERON	113.1	1.57E+06	2.54E+14
ROW 6	98.1	1.64E+10	1.84E+18
LONGERON	83.1	8.89E+11	9.75E+19
ROW 7	68.1	2.67E+12	2.93E+20
LONGERON	53.1	4.29E+12	4.72E+20
ROW 8	38.1	5.62E+12	6.18E+20
LONGERON	23.1	6.57E+12	7.23E+20
ROW 9	8.1	7.07E+12	7.78E+20
LONGERON	7.0	7.09E+12	7.80E+20
ROW 10	21.9	6.62E+12	7.29E+20
LONGERON	36.9	5.71E+12	6.28E+20
ROW 11	51.9	4.40E+12	4.85E+20
LONGERON	66.9	2.80E+12	3.08E+20
ROW 12	81.9	1.02E+12	1.13E+20
LONGERON	96.9	2.55E+10	3.05E+18
SPACE END	89.2	3.02E+11	3.36E+19
EARTH END	-90.8	2.03E+11	2.27E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	7.14E+12	7.86E+20
SIDE DIR	90.0	2.49E+11	2.78E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.35E+06 ATOMS/CM**3
 TEMPERATURE RANGE: 679.6 TO 1048.9 K
 ALTITUDE RANGE: 464.1 TO 473.9 KM

 *DATE: AUGUST 15, 1987 DAY OF YEAR: 227 *
 *CUMULATIVE EXPOSURE TIME: 1225 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.10E+06	5.80E+14
LONGERON	126.9	3.57E+00	5.56E+09
ROW 2	141.9	1.24E-06	3.12E+04
LONGERON	156.9	4.67E-12	1.14E+00
ROW 3	171.9	4.03E-15	3.26E-03
LONGERON	173.0	4.42E-15	3.19E-03
ROW 4	158.1	5.87E-12	9.52E-01
LONGERON	143.1	1.52E-06	1.93E+04
ROW 5	128.1	3.37E+00	2.61E+09
LONGERON	113.1	1.92E+06	2.55E+14
ROW 6	98.1	1.89E+10	1.85E+18
LONGERON	83.1	1.01E+12	9.81E+19
ROW 7	68.1	3.03E+12	2.95E+20
LONGERON	53.1	4.87E+12	4.75E+20
ROW 8	38.1	6.39E+12	6.22E+20
LONGERON	23.1	7.46E+12	7.27E+20
ROW 9	8.1	8.03E+12	7.83E+20
LONGERON	7.0	8.06E+12	7.85E+20
ROW 10	21.9	7.53E+12	7.34E+20
LONGERON	36.9	6.49E+12	6.32E+20
ROW 11	51.9	5.01E+12	4.88E+20
LONGERON	66.9	3.18E+12	3.10E+20
ROW 12	81.9	1.16E+12	1.13E+20
LONGERON	96.9	3.05E+10	3.07E+18
SPACE END	89.2	3.45E+11	3.38E+19
EARTH END	-90.8	2.33E+11	2.28E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	8.12E+12	7.91E+20
SIDE DIR	90.0	2.86E+11	2.80E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.06E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 680.6 TO 1022.8 K
 ALTITUDE RANGE: 464.6 TO 472.6 KM

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*DATE:      AUGUST 22, 1987      DAY OF YEAR: 234 *
*CUMULATIVE EXPOSURE TIME: 1232 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.81E+06	5.83E+14
LONGERON	126.9	9.29E+00	5.57E+09
ROW 2	141.9	4.46E-06	3.12E+04
LONGERON	156.9	1.57E-11	1.14E+00
ROW 3	171.9	9.43E-15	3.26E-03
LONGERON	173.1	6.63E-15	3.19E-03
ROW 4	158.1	6.07E-12	9.52E-01
LONGERON	143.1	1.28E-06	1.93E+04
ROW 5	128.1	2.81E+00	2.61E+09
LONGERON	113.1	1.90E+06	2.56E+14
ROW 6	98.1	2.16E+10	1.87E+18
LONGERON	83.1	1.15E+12	9.88E+19
ROW 7	68.1	3.47E+12	2.97E+20
LONGERON	53.1	5.59E+12	4.78E+20
ROW 8	38.1	7.32E+12	6.27E+20
LONGERON	23.1	8.56E+12	7.32E+20
ROW 9	8.1	9.21E+12	7.88E+20
LONGERON	6.9	9.24E+12	7.91E+20
ROW 10	21.9	8.64E+12	7.39E+20
LONGERON	36.9	7.45E+12	6.37E+20
ROW 11	51.9	5.75E+12	4.91E+20
LONGERON	66.9	3.65E+12	3.12E+20
ROW 12	81.9	1.34E+12	1.14E+20
LONGERON	96.9	3.64E+10	3.09E+18
SPACE END	89.2	3.98E+11	3.40E+19
EARTH END	-90.8	2.70E+11	2.30E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	9.31E+12	7.96E+20
SIDE DIR	90.0	3.30E+11	2.82E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.22E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 701.6 TO 1022.7 K
 ALTITUDE RANGE: 463.9 TO 473.3 KM

 *DATE: AUGUST 29, 1987 DAY OF YEAR: 241 *
 *CUMULATIVE EXPOSURE TIME: 1239 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	7.45E+06	5.87E+14
LONGERON	126.9	2.00E+01	5.58E+09
ROW 2	141.9	1.05E-05	3.12E+04
LONGERON	156.9	3.16E-11	1.14E+00
ROW 3	171.8	1.35E-14	3.26E-03
LONGERON	173.1	6.29E-15	3.19E-03
ROW 4	158.1	4.15E-12	9.52E-01
LONGERON	143.1	7.93E-07	1.93E+04
ROW 5	128.1	2.04E+00	2.61E+09
LONGERON	113.1	1.89E+06	2.57E+14
ROW 6	98.1	2.49E+10	1.88E+18
LONGERON	83.1	1.31E+12	9.96E+19
ROW 7	68.1	3.95E+12	2.99E+20
LONGERON	53.1	6.36E+12	4.82E+20
ROW 8	38.1	8.34E+12	6.32E+20
LONGERON	23.1	9.75E+12	7.38E+20
ROW 9	8.2	1.05E+13	7.95E+20
LONGERON	6.9	1.05E+13	7.97E+20
ROW 10	21.9	9.83E+12	7.45E+20
LONGERON	36.9	8.48E+12	6.42E+20
ROW 11	51.9	6.54E+12	4.95E+20
LONGERON	66.9	4.16E+12	3.15E+20
ROW 12	81.9	1.52E+12	1.15E+20
LONGERON	96.9	4.30E+10	3.12E+18
SPACE END	89.2	4.56E+11	3.43E+19
EARTH END	-90.8	3.09E+11	2.32E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.06E+13	8.03E+20
SIDE DIR	90.0	3.78E+11	2.84E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.39E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 700.3 TO 1039.8 K
 ALTITUDE RANGE: 463.9 TO 474.0 KM

 *DATE: SEPTEMBER 5, 1987 DAY OF YEAR: 248 *
 *CUMULATIVE EXPOSURE TIME: 1246 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	7.84E+06	5.92E+14
LONGERON	126.9	1.98E+01	5.59E+09
ROW 2	141.9	9.29E-06	3.12E+04
LONGERON	156.9	2.73E-11	1.14E+00
ROW 3	171.8	1.32E-14	3.26E-03
LONGERON	173.1	7.43E-15	3.19E-03
ROW 4	158.1	5.42E-12	9.52E-01
LONGERON	143.1	9.42E-07	1.93E+04
ROW 5	128.1	2.05E+00	2.61E+09
LONGERON	113.1	1.88E+06	2.58E+14
ROW 6	98.1	2.62E+10	1.90E+18
LONGERON	83.1	1.39E+12	1.00E+20
ROW 7	68.1	4.18E+12	3.02E+20
LONGERON	53.1	6.73E+12	4.86E+20
ROW 8	38.1	8.82E+12	6.37E+20
LONGERON	23.1	1.03E+13	7.45E+20
ROW 9	8.2	1.11E+13	8.01E+20
LONGERON	6.9	1.11E+13	8.04E+20
ROW 10	21.9	1.04E+13	7.51E+20
LONGERON	36.9	8.97E+12	6.47E+20
ROW 11	51.9	6.92E+12	5.00E+20
LONGERON	66.9	4.40E+12	3.18E+20
ROW 12	81.9	1.61E+12	1.16E+20
LONGERON	96.9	4.53E+10	3.15E+18
SPACE END	89.2	4.82E+11	3.46E+19
EARTH END	-90.8	3.26E+11	2.34E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.12E+13	8.10E+20
SIDE DIR	90.0	4.00E+11	2.86E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.47E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 703.7 TO 1039.2 K
 ALTITUDE RANGE: 463.7 TO 474.0 KM

 *DATE: SEPTEMBER 12, 1987 DAY OF YEAR: 255 *
 *CUMULATIVE EXPOSURE TIME: 1253 DAYS *

AVERAGES AND RANGES ARE BASED ON 1/50 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	8.44E+06	5.97E+14
LONGERON	126.9	1.81E+01	5.60E+09
ROW 2	141.9	8.76E-06	3.12E+04
LONGERON	156.9	3.59E-11	1.14E+00
ROW 3	171.9	2.92E-14	3.26E-03
LONGERON	173.1	2.70E-14	3.19E-03
ROW 4	158.1	2.63E-11	9.52E-01
LONGERON	143.1	4.39E-06	1.93E+04
ROW 5	128.1	6.37E+00	2.62E+09
LONGERON	113.1	3.16E+06	2.60E+14
ROW 6	98.1	3.12E+10	1.92E+18
LONGERON	83.1	1.57E+12	1.01E+20
ROW 7	68.1	4.72E+12	3.05E+20
LONGERON	53.1	7.59E+12	4.91E+20
ROW 8	38.1	9.95E+12	6.43E+20
LONGERON	23.1	1.16E+13	7.52E+20
ROW 9	8.1	1.25E+13	8.09E+20
LONGERON	6.9	1.26E+13	8.11E+20
ROW 10	21.9	1.17E+13	7.58E+20
LONGERON	36.9	1.01E+13	6.53E+20
ROW 11	51.9	7.81E+12	5.04E+20
LONGERON	66.9	4.96E+12	3.21E+20
ROW 12	81.9	1.81E+12	1.17E+20
LONGERON	96.9	5.20E+10	3.18E+18
SPACE END	89.2	5.48E+11	3.49E+19
EARTH END	-90.8	3.73E+11	2.36E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.27E+13	8.17E+20
SIDE DIR	90.0	4.55E+11	2.89E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.66E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 707.9 TO 1076.3 K
 ALTITUDE RANGE: 463.7 TO 473.2 KM

 *DATE: SEPTEMBER 19, 1987 DAY OF YEAR: 262 *
 *CUMULATIVE EXPOSURE TIME: 1260 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	5.73E+06	6.00E+14
LONGERON	126.9	8.13E+00	5.61E+09
ROW 2	141.9	3.18E-06	3.12E+04
LONGERON	156.9	1.24E-11	1.14E+00
ROW 3	171.9	1.11E-14	3.26E-03
LONGERON	173.0	1.31E-14	3.19E-03
ROW 4	158.1	1.77E-11	9.52E-01
LONGERON	143.1	4.01E-06	1.93E+04
ROW 5	128.1	7.00E+00	2.62E+09
LONGERON	113.1	3.30E+06	2.62E+14
ROW 6	98.1	2.94E+10	1.93E+18
LONGERON	83.1	1.49E+12	1.02E+20
ROW 7	68.1	4.47E+12	3.07E+20
LONGERON	53.1	7.19E+12	4.95E+20
ROW 8	38.1	9.42E+12	6.49E+20
LONGERON	23.1	1.10E+13	7.58E+20
ROW 9	8.1	1.19E+13	8.16E+20
LONGERON	7.0	1.19E+13	8.18E+20
ROW 10	21.9	1.11E+13	7.65E+20
LONGERON	36.9	9.57E+12	6.59E+20
ROW 11	51.9	7.38E+12	5.09E+20
LONGERON	66.9	4.69E+12	3.23E+20
ROW 12	81.9	1.71E+12	1.18E+20
LONGERON	96.9	4.70E+10	3.21E+18
SPACE END	89.2	5.15E+11	3.52E+19
EARTH END	-90.8	3.50E+11	2.38E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	1.20E+13	8.25E+20
SIDE DIR	90.0	4.27E+11	2.92E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.57E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 707.8 TO 1078.2 K
 ALTITUDE RANGE: 464.1 TO 472.0 KM

 *DATE: SEPTEMBER 26, 1987 DAY OF YEAR: 269 *
 *CUMULATIVE EXPOSURE TIME: 1267 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.73E+06	6.03E+14
LONGERON	126.9	5.07E+00	5.61E+09
ROW 2	141.9	1.58E-06	3.12E+04
LONGERON	156.9	5.38E-12	1.14E+00
ROW 3	171.9	4.92E-15	3.26E-03
LONGERON	173.0	6.67E-15	3.19E-03
ROW 4	158.1	1.09E-11	9.52E-01
LONGERON	143.1	3.06E-06	1.93E+04
ROW 5	128.1	6.30E+00	2.63E+09
LONGERON	113.1	3.17E+06	2.64E+14
ROW 6	98.1	2.83E+10	1.95E+18
LONGERON	83.1	1.45E+12	1.03E+20
ROW 7	68.1	4.37E+12	3.10E+20
LONGERON	53.1	7.03E+12	4.99E+20
ROW 8	38.1	9.21E+12	6.54E+20
LONGERON	23.1	1.08E+13	7.65E+20
ROW 9	8.1	1.16E+13	8.23E+20
LONGERON	7.0	1.16E+13	8.25E+20
ROW 10	21.9	1.09E+13	7.71E+20
LONGERON	36.9	9.35E+12	6.65E+20
ROW 11	51.9	7.22E+12	5.13E+20
LONGERON	66.9	4.59E+12	3.26E+20
ROW 12	81.9	1.67E+12	1.19E+20
LONGERON	96.9	4.50E+10	3.23E+18
SPACE END	89.2	5.01E+11	3.55E+19
EARTH END	-90.8	3.40E+11	2.40E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.17E+13	8.32E+20
SIDE DIR	90.0	4.15E+11	2.94E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.53E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 708.7 TO 1048.1 K
 ALTITUDE RANGE: 463.5 TO 473.2 KM

 *DATE: OCTOBER 3, 1987 DAY OF YEAR: 276 *
 *CUMULATIVE EXPOSURE TIME: 1274 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	6.24E+06	6.07E+14
LONGERON	126.9	8.75E+00	5.62E+09
ROW 2	141.9	3.68E-06	3.12E+04
LONGERON	156.9	1.62E-11	1.14E+00
ROW 3	171.9	1.53E-14	3.26E-03
LONGERON	173.1	1.67E-14	3.19E-03
ROW 4	158.1	2.01E-11	9.52E-01
LONGERON	143.1	4.25E-06	1.93E+04
ROW 5	128.1	7.41E+00	2.63E+09
LONGERON	113.1	3.60E+06	2.66E+14
ROW 6	98.1	3.20E+10	1.97E+18
LONGERON	83.1	1.61E+12	1.04E+20
ROW 7	68.1	4.85E+12	3.13E+20
LONGERON	53.1	7.81E+12	5.04E+20
ROW 8	38.1	1.02E+13	6.61E+20
LONGERON	23.1	1.20E+13	7.72E+20
ROW 9	8.1	1.29E+13	8.31E+20
LONGERON	6.9	1.29E+13	8.33E+20
ROW 10	21.9	1.21E+13	7.79E+20
LONGERON	36.9	1.04E+13	6.71E+20
ROW 11	51.9	8.02E+12	5.18E+20
LONGERON	66.9	5.10E+12	3.29E+20
ROW 12	81.9	1.86E+12	1.20E+20
LONGERON	96.9	5.15E+10	3.26E+18
SPACE END	89.2	5.60E+11	3.59E+19
EARTH END	-90.8	3.81E+11	2.43E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	1.30E+13	8.40E+20
SIDE DIR	90.0	4.65E+11	2.97E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.70E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 718.9 TO 1052.6 K
 ALTITUDE RANGE: 463.5 TO 473.4 KM

 *DATE: OCTOBER 10, 1987 DAY OF YEAR: 283 *
 *CUMULATIVE EXPOSURE TIME: 1281 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.03E+07	6.13E+14
LONGERON	126.9	3.09E+01	5.64E+09
ROW 2	141.9	2.41E-05	3.13E+04
LONGERON	156.9	1.23E-10	1.14E+00
ROW 3	171.8	8.76E-14	3.26E-03
LONGERON	173.1	5.72E-14	3.19E-03
ROW 4	158.1	3.92E-11	9.52E-01
LONGERON	143.1	5.32E-06	1.93E+04
ROW 5	128.1	7.42E+00	2.63E+09
LONGERON	113.1	3.77E+06	2.68E+14
ROW 6	98.1	3.65E+10	1.99E+18
LONGERON	83.1	1.82E+12	1.05E+20
ROW 7	68.1	5.47E+12	3.16E+20
LONGERON	53.1	8.81E+12	5.09E+20
ROW 8	38.1	1.15E+13	6.67E+20
LONGERON	23.1	1.35E+13	7.80E+20
ROW 9	8.2	1.45E+13	8.40E+20
LONGERON	6.9	1.46E+13	8.42E+20
ROW 10	21.9	1.36E+13	7.87E+20
LONGERON	36.9	1.17E+13	6.78E+20
ROW 11	51.9	9.05E+12	5.23E+20
LONGERON	66.9	5.76E+12	3.33E+20
ROW 12	81.9	2.11E+12	1.22E+20
LONGERON	96.9	6.06E+10	3.30E+18
SPACE END	89.2	6.36E+11	3.62E+19
EARTH END	-90.8	4.33E+11	2.45E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.47E+13	8.48E+20
SIDE DIR	90.0	5.28E+11	3.00E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.92E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 729.2 TO 1063.1 K
 ALTITUDE RANGE: 463.3 TO 473.2 KM

 *DATE: OCTOBER 17, 1987 DAY OF YEAR: 290 *
 *CUMULATIVE EXPOSURE TIME: 1288 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.12E+07	6.26E+14
LONGERON	126.9	1.26E+02	5.71E+09
ROW 2	141.9	1.62E-04	3.14E+04
LONGERON	156.9	1.05E-09	1.14E+00
ROW 3	171.8	7.02E-13	3.26E-03
LONGERON	173.1	3.31E-13	3.19E-03
ROW 4	158.1	1.44E-10	9.52E-01
LONGERON	143.1	1.25E-05	1.93E+04
ROW 5	128.1	1.23E+01	2.64E+09
LONGERON	113.1	5.41E+06	2.72E+14
ROW 6	98.1	4.73E+10	2.02E+18
LONGERON	83.1	2.21E+12	1.07E+20
ROW 7	68.1	6.63E+12	3.20E+20
LONGERON	53.1	1.07E+13	5.16E+20
ROW 8	38.1	1.40E+13	6.76E+20
LONGERON	23.1	1.64E+13	7.90E+20
ROW 9	8.2	1.76E+13	8.50E+20
LONGERON	6.9	1.77E+13	8.53E+20
ROW 10	21.9	1.65E+13	7.97E+20
LONGERON	36.9	1.42E+13	6.87E+20
ROW 11	51.9	1.10E+13	5.30E+20
LONGERON	66.9	6.99E+12	3.37E+20
ROW 12	81.9	2.56E+12	1.23E+20
LONGERON	96.9	7.96E+10	3.35E+18
SPACE END	89.2	7.83E+11	3.67E+19
EARTH END	-90.8	5.36E+11	2.48E+19
	CONSTANT INCIDENCE ANGLE (DEGREES)		
RAM DIR	0.0	1.78E+13	8.59E+20
SIDE DIR	90.0	6.52E+11	3.04E+19

AVERAGE ATOMIC OXYGEN DENSITY: 2.33E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 749.3 TO 1105.4 K
 ALTITUDE RANGE: 463.5 TO 472.0 KM

 *DATE: OCTOBER 24, 1987 DAY OF YEAR: 297 *
 *CUMULATIVE EXPOSURE TIME: 1295 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.95E+07	6.38E+14
LONGERON	126.9	1.01E+02	5.77E+09
ROW 2	141.9	1.23E-04	3.14E+04
LONGERON	156.9	8.43E-10	1.14E+00
ROW 3	171.9	6.61E-13	3.26E-03
LONGERON	173.1	3.83E-13	3.19E-03
ROW 4	158.1	1.92E-10	9.52E-01
LONGERON	143.1	1.65E-05	1.93E+04
ROW 5	128.1	1.44E+01	2.65E+09
LONGERON	113.1	5.57E+06	2.75E+14
ROW 6	98.1	4.70E+10	2.05E+18
LONGERON	83.1	2.20E+12	1.08E+20
ROW 7	68.1	6.59E+12	3.24E+20
LONGERON	53.1	1.06E+13	5.22E+20
ROW 8	38.1	1.39E+13	6.84E+20
LONGERON	23.1	1.63E+13	8.00E+20
ROW 9	8.1	1.75E+13	8.61E+20
LONGERON	6.9	1.75E+13	8.63E+20
ROW 10	21.9	1.64E+13	8.07E+20
LONGERON	36.9	1.41E+13	6.95E+20
ROW 11	51.9	1.09E+13	5.37E+20
LONGERON	66.9	6.93E+12	3.41E+20
ROW 12	81.9	2.54E+12	1.25E+20
LONGERON	96.9	7.83E+10	3.40E+18
SPACE END	89.2	7.77E+11	3.72E+19
EARTH END	-90.8	5.32E+11	2.52E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	1.77E+13	8.70E+20
SIDE DIR	90.0	6.47E+11	3.08E+19

AVERAGE ATOMIC OXYGEN DENSITY: 2.31E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 746.5 TO 1105.4 K
 ALTITUDE RANGE: 463.0 TO 472.0 KM

 *DATE: OCTOBER 31, 1987 DAY OF YEAR: 304 *
 *CUMULATIVE EXPOSURE TIME: 1302 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.67E+07	6.48E+14
LONGERON	126.9	7.72E+01	5.82E+09
ROW 2	141.9	1.09E-04	3.15E+04
LONGERON	156.9	1.08E-09	1.14E+00
ROW 3	171.9	1.28E-12	3.26E-03
LONGERON	173.0	9.77E-13	3.19E-03
ROW 4	158.1	5.22E-10	9.52E-01
LONGERON	143.1	4.03E-05	1.93E+04
ROW 5	128.1	2.69E+01	2.67E+09
LONGERON	113.1	6.85E+06	2.79E+14
ROW 6	98.1	4.62E+10	2.08E+18
LONGERON	83.1	2.13E+12	1.09E+20
ROW 7	68.1	6.39E+12	3.28E+20
LONGERON	53.1	1.03E+13	5.28E+20
ROW 8	38.1	1.35E+13	6.93E+20
LONGERON	23.1	1.58E+13	8.09E+20
ROW 9	8.1	1.70E+13	8.71E+20
LONGERON	7.0	1.70E+13	8.74E+20
ROW 10	21.9	1.59E+13	8.17E+20
LONGERON	36.9	1.37E+13	7.04E+20
ROW 11	51.9	1.06E+13	5.43E+20
LONGERON	66.9	6.73E+12	3.45E+20
ROW 12	81.9	2.46E+12	1.26E+20
LONGERON	96.9	7.53E+10	3.44E+18
SPACE END	89.2	7.53E+11	3.76E+19
EARTH END	-90.8	5.16E+11	2.55E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.71E+13	8.80E+20
SIDE DIR	90.0	6.28E+11	3.12E+19

AVERAGE ATOMIC OXYGEN DENSITY: 2.25E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 752.0 TO 1147.1 K
 ALTITUDE RANGE: 462.9 TO 472.8 KM

 *DATE: NOVEMBER 7, 1987 DAY OF YEAR: 311 *
 *CUMULATIVE EXPOSURE TIME: 1309 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.10E+07	6.55E+14
LONGERON	126.9	3.71E+01	5.84E+09
ROW 2	141.9	4.45E-05	3.15E+04
LONGERON	156.9	4.09E-10	1.14E+00
ROW 3	171.9	4.91E-13	3.26E-03
LONGERON	173.0	4.37E-13	3.19E-03
ROW 4	158.1	3.11E-10	9.53E-01
LONGERON	143.1	3.23E-05	1.94E+04
ROW 5	128.1	2.57E+01	2.68E+09
LONGERON	113.1	6.28E+06	2.83E+14
ROW 6	98.1	3.94E+10	2.10E+18
LONGERON	83.1	1.87E+12	1.10E+20
ROW 7	68.1	5.61E+12	3.32E+20
LONGERON	53.1	9.03E+12	5.34E+20
ROW 8	38.1	1.18E+13	7.00E+20
LONGERON	23.1	1.38E+13	8.18E+20
ROW 9	8.1	1.49E+13	8.80E+20
LONGERON	7.0	1.49E+13	8.83E+20
ROW 10	21.9	1.40E+13	8.25E+20
LONGERON	36.9	1.20E+13	7.11E+20
ROW 11	51.9	9.28E+12	5.49E+20
LONGERON	66.9	5.90E+12	3.49E+20
ROW 12	81.9	2.16E+12	1.27E+20
LONGERON	96.9	6.34E+10	3.48E+18
SPACE END	89.2	6.55E+11	3.80E+19
EARTH END	-90.8	4.48E+11	2.58E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.50E+13	8.89E+20
SIDE DIR	90.0	5.45E+11	3.15E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.97E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 732.3 TO 1145.3 K
 ALTITUDE RANGE: 462.7 TO 472.8 KM

 *DATE: NOVEMBER 14, 1987 DAY OF YEAR: 318 *
 *CUMULATIVE EXPOSURE TIME: 1316 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	8.49E+06	6.60E+14
LONGERON	126.9	2.08E+01	5.86E+09
ROW 2	141.9	1.94E-05	3.15E+04
LONGERON	156.9	1.64E-10	1.14E+00
ROW 3	171.9	2.30E-13	3.26E-03
LONGERON	173.0	2.77E-13	3.19E-03
ROW 4	158.1	2.52E-10	9.53E-01
LONGERON	143.1	2.95E-05	1.94E+04
ROW 5	128.1	2.43E+01	2.70E+09
LONGERON	113.1	5.85E+06	2.87E+14
ROW 6	98.1	3.64E+10	2.12E+18
LONGERON	83.1	1.75E+12	1.11E+20
ROW 7	68.1	5.25E+12	3.35E+20
LONGERON	53.1	8.44E+12	5.39E+20
ROW 8	38.1	1.11E+13	7.06E+20
LONGERON	23.1	1.29E+13	8.26E+20
ROW 9	8.1	1.39E+13	8.89E+20
LONGERON	7.0	1.40E+13	8.91E+20
ROW 10	21.9	1.30E+13	8.33E+20
LONGERON	36.9	1.12E+13	7.18E+20
ROW 11	51.9	8.67E+12	5.54E+20
LONGERON	66.9	5.51E+12	3.52E+20
ROW 12	81.9	2.01E+12	1.29E+20
LONGERON	96.9	5.75E+10	3.52E+18
SPACE END	89.2	6.09E+11	3.84E+19
EARTH END	-90.8	4.16E+11	2.60E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.41E+13	8.98E+20
SIDE DIR	90.0	5.07E+11	3.18E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.84E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 731.1 TO 1137.7 K
 ALTITUDE RANGE: 462.7 TO 472.1 KM


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*DATE:  NOVEMBER 21, 1987          DAY OF YEAR:  325 *
*CUMULATIVE EXPOSURE TIME: 1323  DAYS                *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.49E+07	6.69E+14
LONGERON	126.9	6.49E+01	5.89E+09
ROW 2	141.9	1.10E-04	3.16E+04
LONGERON	156.9	1.58E-09	1.14E+00
ROW 3	171.9	2.83E-12	3.26E-03
LONGERON	173.1	2.95E-12	3.19E-03
ROW 4	158.1	1.72E-09	9.54E-01
LONGERON	143.1	1.13E-04	1.94E+04
ROW 5	128.1	5.37E+01	2.73E+09
LONGERON	113.1	8.98E+06	2.92E+14
ROW 6	98.1	4.62E+10	2.15E+18
LONGERON	83.1	2.06E+12	1.13E+20
ROW 7	68.1	6.18E+12	3.39E+20
LONGERON	53.1	9.94E+12	5.45E+20
ROW 8	38.1	1.30E+13	7.14E+20
LONGERON	23.1	1.52E+13	8.35E+20
ROW 9	8.1	1.64E+13	8.99E+20
LONGERON	6.9	1.64E+13	9.01E+20
ROW 10	21.9	1.54E+13	8.42E+20
LONGERON	36.9	1.32E+13	7.26E+20
ROW 11	51.9	1.02E+13	5.60E+20
LONGERON	66.9	6.49E+12	3.56E+20
ROW 12	81.9	2.38E+12	1.30E+20
LONGERON	96.9	7.26E+10	3.56E+18
SPACE END	89.2	7.29E+11	3.89E+19
EARTH END	-90.8	5.01E+11	2.63E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.66E+13	9.08E+20
SIDE DIR	90.0	6.08E+11	3.22E+19

AVERAGE ATOMIC OXYGEN DENSITY: 2.17E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 736.0 TO 1181.2 K
 ALTITUDE RANGE: 463.0 TO 470.8 KM

 *DATE: NOVEMBER 28, 1987 DAY OF YEAR: 332 *
 *CUMULATIVE EXPOSURE TIME: 1330 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.90E+07	6.80E+14
LONGERON	126.9	1.14E+02	5.96E+09
ROW 2	141.9	1.89E-04	3.17E+04
LONGERON	156.9	2.16E-09	1.14E+00
ROW 3	171.8	2.93E-12	3.26E-03
LONGERON	173.1	2.38E-12	3.19E-03
ROW 4	158.1	1.18E-09	9.55E-01
LONGERON	143.1	7.23E-05	1.95E+04
ROW 5	128.1	3.60E+01	2.75E+09
LONGERON	113.1	7.23E+06	2.96E+14
ROW 6	98.1	4.44E+10	2.18E+18
LONGERON	83.1	2.02E+12	1.14E+20
ROW 7	68.1	6.06E+12	3.42E+20
LONGERON	53.1	9.75E+12	5.51E+20
ROW 8	38.1	1.28E+13	7.22E+20
LONGERON	23.1	1.49E+13	8.44E+20
ROW 9	8.2	1.61E+13	9.08E+20
LONGERON	6.9	1.61E+13	9.11E+20
ROW 10	21.9	1.51E+13	8.51E+20
LONGERON	36.9	1.30E+13	7.34E+20
ROW 11	51.9	1.00E+13	5.66E+20
LONGERON	66.9	6.38E+12	3.60E+20
ROW 12	81.9	2.34E+12	1.31E+20
LONGERON	96.9	7.27E+10	3.60E+18
SPACE END	89.2	7.16E+11	3.93E+19
EARTH END	-90.8	4.91E+11	2.66E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	1.62E+13	9.18E+20
SIDE DIR	90.0	5.97E+11	3.25E+19

AVERAGE ATOMIC OXYGEN DENSITY: 2.13E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 719.1 TO 1179.3 K
 ALTITUDE RANGE: 462.2 TO 471.9 KM

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*****
*DATE:  DECEMBER  5, 1987          DAY OF YEAR:  339 *
*CUMULATIVE EXPOSURE TIME: 1337 DAYS                      *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.54E+07	6.90E+14
LONGERON	126.9	8.96E+01	6.02E+09
ROW 2	141.9	1.16E-04	3.18E+04
LONGERON	156.9	8.44E-10	1.14E+00
ROW 3	171.8	7.12E-13	3.27E-03
LONGERON	173.1	4.44E-13	3.19E-03
ROW 4	158.1	2.26E-10	9.55E-01
LONGERON	143.1	1.78E-05	1.95E+04
ROW 5	128.1	1.30E+01	2.76E+09
LONGERON	113.1	4.11E+06	2.99E+14
ROW 6	98.1	3.51E+10	2.20E+18
LONGERON	83.1	1.72E+12	1.15E+20
ROW 7	68.1	5.15E+12	3.45E+20
LONGERON	53.1	8.28E+12	5.56E+20
ROW 8	38.1	1.09E+13	7.29E+20
LONGERON	23.1	1.27E+13	8.52E+20
ROW 9	8.2	1.37E+13	9.17E+20
LONGERON	6.9	1.37E+13	9.19E+20
ROW 10	21.9	1.28E+13	8.59E+20
LONGERON	36.9	1.10E+13	7.40E+20
ROW 11	51.9	8.51E+12	5.71E+20
LONGERON	66.9	5.41E+12	3.63E+20
ROW 12	81.9	1.98E+12	1.33E+20
LONGERON	96.9	5.92E+10	3.64E+18
SPACE END	89.2	6.01E+11	3.97E+19
EARTH END	-90.8	4.09E+11	2.69E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.38E+13	9.26E+20
SIDE DIR	90.0	5.00E+11	3.29E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.81E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 700.9 TO 1134.9 K
 ALTITUDE RANGE: 462.2 TO 472.4 KM

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*****
*DATE:  DLCEMBER 12, 1987          DAY OF YEAR:  346 *
*CUMULATIVE EXPOSURE TIME: 1344  DAYS                *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.41E+07	6.98E+14
LONGERON	126.9	8.18E+01	6.07E+09
ROW 2	141.9	1.26E-04	3.19E+04
LONGERON	156.9	1.26E-09	1.15E+00
ROW 3	171.9	1.42E-12	3.27E-03
LONGERON	173.1	9.80E-13	3.20E-03
ROW 4	158.1	4.40E-10	9.55E-01
LONGERON	143.1	2.78E-05	1.95E+04
ROW 5	128.1	1.66E+01	2.77E+09
LONGERON	113.1	4.37E+06	3.01E+14
ROW 6	98.1	3.38E+10	2.22E+18
LONGERON	83.1	1.64E+12	1.16E+20
ROW 7	68.1	4.93E+12	3.48E+20
LONGERON	53.1	7.93E+12	5.61E+20
ROW 8	38.1	1.04E+13	7.35E+20
LONGERON	23.1	1.22E+13	8.59E+20
ROW 9	8.1	1.31E+13	9.24E+20
LONGERON	6.9	1.31E+13	9.27E+20
ROW 10	21.9	1.23E+13	8.66E+20
LONGERON	36.9	1.06E+13	7.47E+20
ROW 11	51.9	8.15E+12	5.76E+20
LONGERON	66.9	5.18E+12	3.66E+20
ROW 12	81.9	1.90E+12	1.34E+20
LONGERON	96.9	5.64E+10	3.67E+18
SPACE END	89.2	5.76E+11	4.00E+19
EARTH END	-90.8	3.92E+11	2.71E+19
	CONSTANT INCIDENCE ANGLE (DEGREES)		
RAM DIR	0.0	1.32E+13	9.34E+20
SIDE DIR	90.0	4.79E+11	3.31E+19

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AVERAGE ATOMIC OXYGEN DENSITY:  1.73E+07 ATOMS/CM**3
TEMPERATURE RANGE:  702.4 TO 1151.8 K
ALTITUDE RANGE:  461.0 TO 472.3 KM

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 *DATE: DECEMBER 19, 1987 DAY OF YEAR: 353 *
 *CUMULATIVE EXPOSURE TIME: 1351 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.39E+07	7.07E+14
LONGERON	126.9	9.39E+01	6.12E+09
ROW 2	141.9	1.98E-04	3.20E+04
LONGERON	156.9	2.60E-09	1.15E+00
ROW 3	171.9	3.42E-12	3.27E-03
LONGERON	173.0	2.39E-12	3.20E-03
ROW 4	158.1	1.01E-09	9.56E-01
LONGERON	143.1	5.86E-05	1.95E+04
ROW 5	128.1	3.01E+01	2.79E+09
LONGERON	113.1	5.88E+06	3.05E+14
ROW 6	98.1	3.42E+10	2.24E+18
LONGERON	83.1	1.62E+12	1.17E+20
ROW 7	68.1	4.85E+12	3.51E+20
LONGERON	53.1	7.81E+12	5.65E+20
ROW 8	38.1	1.02E+13	7.41E+20
LONGERON	23.1	1.20E+13	8.66E+20
ROW 9	8.1	1.29E+13	9.32E+20
LONGERON	7.0	1.29E+13	9.35E+20
ROW 10	21.9	1.21E+13	8.74E+20
LONGERON	36.9	1.04E+13	7.53E+20
ROW 11	51.9	8.03E+12	5.81E+20
LONGERON	66.9	5.11E+12	3.69E+20
ROW 12	81.9	1.87E+12	1.35E+20
LONGERON	96.9	5.65E+10	3.71E+18
SPACE END	89.2	5.69E+11	4.03E+19
EARTH END	-90.8	3.89E+11	2.73E+19
	CONSTANT INCIDENCE ANGLE (DEGREES)		
RAM DIR	0.0	1.30E+13	9.42E+20
SIDE DIR	90.0	4.73E+11	3.34E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.71E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 703.0 TO 1174.7 K
 ALTITUDE RANGE: 461.0 TO 471.8 KM

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*DATE:  DECEMBER 26, 1987          DAY OF YEAR: 360 *
*CUMULATIVE EXPOSURE TIME: 1358 DAYS                      *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	9.14E+06	7.12E+14
LONGERON	126.9	3.97E+01	6.15E+09
ROW 2	141.9	5.96E-05	3.20E+04
LONGERON	156.9	6.29E-10	1.15E+00
ROW 3	171.9	7.78E-13	3.27E-03
LONGERON	173.0	6.51E-13	3.20E-03
ROW 4	158.1	4.09E-10	9.56E-01
LONGERON	143.1	3.66E-05	1.96E+04
ROW 5	128.1	2.54E+01	2.80E+09
LONGERON	113.1	5.41E+06	3.08E+14
ROW 6	98.1	3.02E+10	2.26E+18
LONGERON	83.1	1.44E+12	1.18E+20
ROW 7	68.1	4.34E+12	3.54E+20
LONGERON	53.1	6.98E+12	5.70E+20
ROW 8	38.1	9.15E+12	7.47E+20
LONGERON	23.1	1.07E+13	8.73E+20
ROW 9	8.1	1.15E+13	9.39E+20
LONGERON	7.0	1.15E+13	9.42E+20
ROW 10	21.9	1.08E+13	8.80E+20
LONGERON	36.9	9.30E+12	7.59E+20
ROW 11	51.9	7.18E+12	5.85E+20
LONGERON	66.9	4.56E+12	3.72E+20
ROW 12	81.9	1.67E+12	1.36E+20
LONGERON	96.9	4.86E+10	3.74E+18
SPACE END	89.2	5.05E+11	4.06E+19
EARTH END	-90.8	3.44E+11	2.75E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.16E+13	9.49E+20
SIDE DIR	90.0	4.20E+11	3.37E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.52E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 695.8 TO 1163.8 K
 ALTITUDE RANGE: 461.9 TO 469.5 KM

 *DATE: JANUARY 2, 1988 DAY OF YEAR: 2 *
 *CUMULATIVE EXPOSURE TIME: 1365 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	7.93E+06	7.17E+14
LONGERON	126.9	2.62E+01	6.16E+09
ROW 2	141.9	3.28E-05	3.20E+04
LONGERON	156.9	3.55E-10	1.15E+00
ROW 3	171.9	5.49E-13	3.27E-03
LONGERON	173.1	6.07E-13	3.20E-03
ROW 4	158.1	4.50E-10	9.56E-01
LONGERON	143.1	4.13E-05	1.96E+04
ROW 5	128.1	2.76E+01	2.82E+09
LONGERON	113.1	5.64E+06	3.12E+14
ROW 6	98.1	3.08E+10	2.28E+18
LONGERON	83.1	1.45E+12	1.19E+20
ROW 7	68.1	4.36E+12	3.56E+20
LONGERON	53.1	7.01E+12	5.74E+20
ROW 8	38.1	9.18E+12	7.52E+20
LONGERON	23.1	1.07E+13	8.79E+20
ROW 9	8.1	1.16E+13	9.46E+20
LONGERON	6.9	1.16E+13	9.49E+20
ROW 10	21.9	1.08E+13	8.87E+20
LONGERON	36.9	9.33E+12	7.64E+20
ROW 11	51.9	7.20E+12	5.90E+20
LONGERON	66.9	4.57E+12	3.75E+20
ROW 12	81.9	1.67E+12	1.37E+20
LONGERON	96.9	4.79E+10	3.77E+18
SPACE END	89.2	5.06E+11	4.10E+19
EARTH END	-90.8	3.46E+11	2.77E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.17E+13	9.56E+20
SIDE DIR	90.0	4.21E+11	3.39E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.53E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 692.5 TO 1166.4 K
 ALTITUDE RANGE: 460.7 TO 471.7 KM

 *DATE: JANUARY 9, 1988 DAY OF YEAR: 9 *
 *CUMULATIVE EXPOSURE TIME: 1372 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.40E+07	7.25E+14
LONGERON	126.9	7.81E+01	6.21E+09
ROW 2	141.9	1.55E-04	3.21E+04
LONGERON	156.9	2.40E-09	1.15E+00
ROW 3	171.8	4.14E-12	3.27E-03
LONGERON	173.1	3.83E-12	3.20E-03
ROW 4	158.1	1.93E-09	9.57E-01
LONGERON	143.1	1.10E-04	1.97E+04
ROW 5	128.1	4.68E+01	2.85E+09
LONGERON	113.1	7.42E+06	3.16E+14
ROW 6	98.1	3.83E+10	2.30E+18
LONGERON	83.1	1.73E+12	1.20E+20
ROW 7	68.1	5.17E+12	3.60E+20
LONGERON	53.1	8.31E+12	5.79E+20
ROW 8	38.1	1.09E+13	7.59E+20
LONGERON	23.1	1.27E+13	8.87E+20
ROW 9	8.2	1.37E+13	9.55E+20
LONGERON	6.9	1.37E+13	9.57E+20
ROW 10	21.9	1.28E+13	8.95E+20
LONGERON	36.9	1.11E+13	7.71E+20
ROW 11	51.9	8.54E+12	5.95E+20
LONGERON	66.9	5.43E+12	3.78E+20
ROW 12	81.9	1.99E+12	1.38E+20
LONGERON	96.9	6.06E+10	3.80E+18
SPACE END	89.2	6.09E+11	4.13E+19
EARTH END	-90.8	4.18E+11	2.80E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	1.38E+13	9.64E+20
SIDE DIR	90.0	5.08E+11	3.42E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.81E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 701.5 TO 1186.4 K
 ALTITUDE RANGE: 460.7 TO 472.5 KM

 *DATE: JANUARY 16, 1988 DAY OF YEAR: 16 *
 *CUMULATIVE EXPOSURE TIME: 1379 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.00E+07	7.44E+14
LONGERON	126.9	3.36E+02	6.41E+09
ROW 2	141.9	1.07E-03	3.28E+04
LONGERON	156.9	1.99E-08	1.16E+00
ROW 3	171.8	3.31E-11	3.29E-03
LONGERON	173.1	2.49E-11	3.21E-03
ROW 4	158.1	8.63E-09	9.62E-01
LONGERON	143.1	3.00E-04	1.98E+04
ROW 5	128.1	7.89E+01	2.90E+09
LONGERON	113.1	9.85E+06	3.22E+14
ROW 6	98.1	4.84E+10	2.33E+18
LONGERON	83.1	2.07E+12	1.21E+20
ROW 7	68.1	6.19E+12	3.63E+20
LONGERON	53.1	9.97E+12	5.85E+20
ROW 8	38.1	1.31E+13	7.67E+20
LONGERON	23.1	1.53E+13	8.96E+20
ROW 9	8.2	1.64E+13	9.64E+20
LONGERON	6.9	1.65E+13	9.67E+20
ROW 10	21.9	1.54E+13	9.04E+20
LONGERON	36.9	1.33E+13	7.79E+20
ROW 11	51.9	1.02E+13	6.01E+20
LONGERON	66.9	6.52E+12	3.82E+20
ROW 12	81.9	2.39E+12	1.40E+20
LONGERON	96.9	7.97E+10	3.85E+18
SPACE END	89.2	7.42E+11	4.18E+19
EARTH END	-90.8	5.12E+11	2.83E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.66E+13	9.74E+20
SIDE DIR	90.0	6.20E+11	3.46E+19

AVERAGE ATOMIC OXYGEN DENSITY: 2.18E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 711.7 TO 1218.2 K
 ALTITUDE RANGE: 460.5 TO 472.3 KM

 *DATE: JANUARY 23, 1988 DAY OF YEAR: 23 *
 *CUMULATIVE EXPOSURE TIME: 1386 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.64E+07	7.59E+14
LONGERON	126.9	2.71E+02	6.58E+09
ROW 2	141.9	7.92E-04	3.33E+04
LONGERON	156.9	1.34E-08	1.17E+00
ROW 3	171.9	2.06E-11	3.30E-03
LONGERON	173.1	1.47E-11	3.22E-03
ROW 4	158.1	4.94E-09	9.65E-01
LONGERON	143.1	1.73E-04	1.99E+04
ROW 5	128.1	5.07E+01	2.93E+09
LONGERON	113.1	7.91E+06	3.27E+14
ROW 6	98.1	4.55E+10	2.36E+18
LONGERON	83.1	2.00E+12	1.22E+20
ROW 7	68.1	5.98E+12	3.67E+20
LONGERON	53.1	9.62E+12	5.91E+20
ROW 8	38.1	1.26E+13	7.74E+20
LONGERON	23.1	1.47E+13	9.05E+20
ROW 9	8.1	1.59E+13	9.74E+20
LONGERON	6.9	1.59E+13	9.77E+20
ROW 10	21.9	1.49E+13	9.13E+20
LONGERON	36.9	1.28E+13	7.87E+20
ROW 11	51.9	9.89E+12	6.07E+20
LONGERON	66.9	6.29E+12	3.86E+20
ROW 12	81.9	2.30E+12	1.41E+20
LONGERON	96.9	7.48E+10	3.90E+18
SPACE END	89.2	7.13E+11	4.22E+19
EARTH END	-90.8	4.90E+11	2.86E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.60E+13	9.84E+20
SIDE DIR	90.0	5.95E+11	3.50E+19

AVERAGE ATOMIC OXYGEN DENSITY: 2.10E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 721.8 TO 1216.1 K
 ALTITUDE RANGE: 460.6 TO 470.3 KM

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*DATE:    JANUARY 30, 1988          DAY OF YEAR:  30 *
*CUMULATIVE EXPOSURE TIME: 1393 DAYS
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.08E+07	7.66E+14
LONGERON	126.9	4.62E+01	6.61E+09
ROW 2	141.9	5.06E-05	3.33E+04
LONGERON	156.9	3.80E-10	1.17E+00
ROW 3	171.9	3.79E-13	3.30E-03
LONGERON	173.0	2.83E-13	3.22E-03
ROW 4	158.1	1.67E-10	9.66E-01
LONGERON	143.1	1.52E-05	2.00E+04
ROW 5	128.1	1.25E+01	2.93E+09
LONGERON	113.1	3.85E+06	3.29E+14
ROW 6	98.1	3.08E+10	2.38E+18
LONGERON	83.1	1.53E+12	1.23E+20
ROW 7	68.1	4.58E+12	3.70E+20
LONGERON	53.1	7.38E+12	5.95E+20
ROW 8	38.1	9.67E+12	7.80E+20
LONGERON	23.1	1.13E+13	9.12E+20
ROW 9	8.1	1.22E+13	9.81E+20
LONGERON	7.0	1.22E+13	9.84E+20
ROW 10	21.9	1.14E+13	9.20E+20
LONGERON	36.9	9.83E+12	7.93E+20
ROW 11	51.9	7.58E+12	6.12E+20
LONGERON	66.9	4.82E+12	3.89E+20
ROW 12	81.9	1.76E+12	1.42E+20
LONGERON	96.9	5.13E+10	3.93E+18

SPACE END	89.2	5.33E+11	4.25E+19
EARTH END	-90.8	3.63E+11	2.88E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.23E+13	9.92E+20
SIDE DIR	90.0	4.43E+11	3.52E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.61E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 714.4 TO 1131.3 K
 ALTITUDE RANGE: 460.6 TO 469.6 KM

 *DATE: FEBRUARY 6, 1988 DAY OF YEAR: 37 *
 *CUMULATIVE EXPOSURE TIME: 1400 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	9.28E+06	7.72E+14
LONGERON	126.9	3.05E+01	6.62E+09
ROW 2	141.9	3.00E-05	3.33E+04
LONGERON	156.9	2.27E-10	1.17E+00
ROW 3	171.9	2.69E-13	3.30E-03
LONGERON	173.0	2.84E-13	3.22E-03
ROW 4	158.1	2.42E-10	9.66E-01
LONGERON	143.1	2.71E-05	2.00E+04
ROW 5	128.1	2.16E+01	2.95E+09
LONGERON	113.1	5.14E+06	3.32E+14
ROW 6	98.1	3.24E+10	2.40E+18
LONGERON	83.1	1.57E+12	1.24E+20
ROW 7	68.1	4.72E+12	3.73E+20
LONGERON	53.1	7.60E+12	6.00E+20
ROW 8	38.1	9.97E+12	7.86E+20
LONGERON	23.1	1.17E+13	9.19E+20
ROW 9	8.1	1.25E+13	9.89E+20
LONGERON	7.0	1.26E+13	9.92E+20
ROW 10	21.9	1.18E+13	9.27E+20
LONGERON	36.9	1.01E+13	7.99E+20
ROW 11	51.9	7.82E+12	6.16E+20
LONGERON	66.9	4.97E+12	3.92E+20
ROW 12	81.9	1.82E+12	1.43E+20
LONGERON	96.9	5.28E+10	3.96E+18
SPACE END	89.2	5.49E+11	4.29E+19
EARTH END	-90.8	3.75E+11	2.90E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.27E+13	9.99E+20
SIDE DIR	90.0	4.57E+11	3.55E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.66E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 718.1 TO 1125.6 K
 ALTITUDE RANGE: 460.1 TO 471.5 KM

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*****
*DATE:  FEBRUARY 13, 1988          DAY OF YEAR:  44 *
*CUMULATIVE EXPOSURE TIME: 1407 DAYS
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.03E+07	7.78E+14
LONGERON	126.9	3.04E+01	6.64E+09
ROW 2	141.9	3.34E-05	3.33E+04
LONGERON	156.9	3.17E-10	1.17E+00
ROW 3	171.9	4.80E-13	3.30E-03
LONGERON	173.0	5.93E-13	3.22E-03
ROW 4	158.1	5.14E-10	9.66E-01
LONGERON	143.1	5.27E-05	2.00E+04
ROW 5	128.1	3.58E+01	2.97E+09
LONGERON	113.1	7.11E+06	3.37E+14
ROW 6	98.1	3.88E+10	2.42E+18
LONGERON	83.1	1.79E+12	1.25E+20
ROW 7	68.1	5.38E+12	3.76E+20
LONGERON	53.1	8.65E+12	6.05E+20
ROW 8	38.1	1.13E+13	7.93E+20
LONGERON	23.1	1.33E+13	9.27E+20
ROW 9	8.1	1.43E+13	9.98E+20
LONGERON	7.0	1.43E+13	1.00E+21
ROW 10	21.9	1.34E+13	9.35E+20
LONGERON	36.9	1.15E+13	8.06E+20
ROW 11	51.9	8.89E+12	6.22E+20
LONGERON	66.9	5.65E+12	3.95E+20
ROW 12	81.9	2.07E+12	1.44E+20
LONGERON	96.9	6.10E+10	4.00E+18
SPACE END	89.2	6.29E+11	4.32E+19
EARTH END	-90.8	4.31E+11	2.93E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.44E+13	1.01E+21
SIDE DIR	90.0	5.24E+11	3.58E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.89E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 733.9 TO 1142.0 K
 ALTITUDE RANGE: 460.0 TO 471.6 KM

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*DATE:  FEBRUARY 20, 1988           DAY OF YEAR:  51 *
*CUMULATIVE EXPOSURE TIME: 1414 DAYS
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.81E+07	7.89E+14
LONGERON	126.9	8.31E+01	6.69E+09
ROW 2	141.9	1.50E-04	3.34E+04
LONGERON	156.9	2.28E-09	1.17E+00
ROW 3	171.9	4.21E-12	3.31E-03
LONGERON	173.1	4.38E-12	3.23E-03
ROW 4	158.1	2.46E-09	9.67E-01
LONGERON	143.1	1.51E-04	2.01E+04
ROW 5	128.1	6.70E+01	3.01E+09
LONGERON	113.1	1.06E+07	3.43E+14
ROW 6	98.1	5.17E+10	2.45E+18
LONGERON	83.1	2.23E+12	1.26E+20
ROW 7	68.1	6.68E+12	3.80E+20
LONGERON	53.1	1.07E+13	6.12E+20
ROW 8	38.1	1.41E+13	8.01E+20
LONGERON	23.1	1.65E+13	9.37E+20
ROW 9	8.1	1.77E+13	1.01E+21
LONGERON	6.9	1.78E+13	1.01E+21
ROW 10	21.9	1.66E+13	9.45E+20
LONGERON	36.9	1.43E+13	8.14E+20
ROW 11	51.9	1.10E+13	6.28E+20
LONGERON	66.9	7.02E+12	4.00E+20
ROW 12	81.9	2.57E+12	1.46E+20
LONGERON	96.9	8.09E+10	4.04E+18
SPACE END	89.2	7.93E+11	4.37E+19
EARTH END	-90.8	5.47E+11	2.96E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.79E+13	1.02E+21
SIDE DIR	90.0	6.63E+11	3.62E+19

AVERAGE ATOMIC OXYGEN DENSITY: 2.34E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 750.8 TO 1180.9 K
 ALTITUDE RANGE: 459.9 TO 470.9 KM

 *DATE: FEBRUARY 27, 1988 DAY OF YEAR: 58 *
 *CUMULATIVE EXPOSURE TIME: 1421 DAYS *

AVERAGES AND RANGES ARE BASED ON 1/50 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.49E+07	8.04E+14
LONGERON	126.9	1.58E+02	6.79E+09
ROW 2	141.9	2.75E-04	3.36E+04
LONGERON	156.9	3.16E-09	1.17E+00
ROW 3	171.8	4.24E-12	3.31E-03
LONGERON	173.1	3.37E-12	3.23E-03
ROW 4	158.1	1.58E-09	9.68E-01
LONGERON	143.1	9.07E-05	2.02E+04
ROW 5	128.1	4.40E+01	3.04E+09
LONGERON	113.1	9.26E+06	3.49E+14
ROW 6	98.1	5.53E+10	2.48E+18
LONGERON	83.1	2.42E+12	1.28E+20
ROW 7	68.1	7.24E+12	3.84E+20
LONGERON	53.1	1.17E+13	6.19E+20
ROW 8	38.1	1.53E+13	8.11E+20
LONGERON	23.1	1.79E+13	9.48E+20
ROW 9	8.2	1.92E+13	1.02E+21
LONGERON	6.9	1.93E+13	1.02E+21
ROW 10	21.9	1.80E+13	9.56E+20
LONGERON	36.9	1.55E+13	8.24E+20
ROW 11	51.9	1.20E+13	6.36E+20
LONGERON	66.9	7.62E+12	4.04E+20
ROW 12	81.9	2.80E+12	1.48E+20
LONGERON	96.9	9.01E+10	4.10E+18
SPACE END	89.2	8.64E+11	4.42E+19
EARTH END	-90.8	5.95E+11	3.00E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.94E+13	1.03E+21
SIDE DIR	90.0	7.21E+11	3.67E+19

AVERAGE ATOMIC OXYGEN DENSITY: 2.54E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 751.8 TO 1179.6 K
 ALTITUDE RANGE: 460.5 TO 468.5 KM

 *DATE: MARCH 5, 1988 DAY OF YEAR: 65 *
 *CUMULATIVE EXPOSURE TIME: 1428 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.76E+07	8.21E+14
LONGERON	126.9	2.10E+02	6.92E+09
ROW 2	141.9	3.67E-04	3.38E+04
LONGERON	156.9	3.16E-09	1.17E+00
ROW 3	171.8	2.51E-12	3.31E-03
LONGERON	173.1	1.19E-12	3.23E-03
ROW 4	158.1	4.27E-10	9.69E-01
LONGERON	143.1	2.70E-05	2.02E+04
ROW 5	128.1	1.95E+01	3.05E+09
LONGERON	113.1	6.90E+06	3.53E+14
ROW 6	98.1	5.37E+10	2.52E+18
LONGERON	83.1	2.44E+12	1.29E+20
ROW 7	68.1	7.30E+12	3.89E+20
LONGERON	53.1	1.18E+13	6.26E+20
ROW 8	38.1	1.54E+13	8.20E+20
LONGERON	23.1	1.80E+13	9.59E+20
ROW 9	8.2	1.94E+13	1.03E+21
LONGERON	6.9	1.94E+13	1.03E+21
ROW 10	21.9	1.82E+13	9.67E+20
LONGERON	36.9	1.57E+13	8.33E+20
ROW 11	51.9	1.21E+13	6.43E+20
LONGERON	66.9	7.69E+12	4.09E+20
ROW 12	81.9	2.82E+12	1.49E+20
LONGERON	96.9	9.02E+10	4.15E+18
SPACE END	89.2	8.67E+11	4.48E+19
EARTH END	-90.8	5.95E+11	3.04E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.96E+13	1.04E+21
SIDE DIR	90.0	7.23E+11	3.71E+19

AVERAGE ATOMIC OXYGEN DENSITY: 2.56E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 753.7 TO 1122.6 K
 ALTITUDE RANGE: 459.2 TO 469.8 KM


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*DATE:      MARCH 12, 1988      DAY OF YEAR:  72 *
*CUMULATIVE EXPOSURE TIME: 1435 DAYS
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.78E+07	8.37E+14
LONGERON	126.9	1.72E+02	7.02E+09
ROW 2	141.9	2.83E-04	3.40E+04
LONGERON	156.9	2.88E-09	1.18E+00
ROW 3	171.9	3.26E-12	3.31E-03
LONGERON	173.1	2.29E-12	3.23E-03
ROW 4	158.1	1.06E-09	9.69E-01
LONGERON	143.1	6.57E-05	2.02E+04
ROW 5	128.1	3.65E+01	3.07E+09
LONGERON	113.1	9.24E+06	3.58E+14
ROW 6	98.1	6.07E+10	2.55E+18
LONGERON	83.1	2.67E+12	1.31E+20
ROW 7	68.1	7.98E+12	3.94E+20
LONGERON	53.1	1.29E+13	6.33E+20
ROW 8	38.1	1.68E+13	8.30E+20
LONGERON	23.1	1.97E+13	9.70E+20
ROW 9	8.1	2.12E+13	1.04E+21
LONGERON	6.9	2.13E+13	1.05E+21
ROW 10	21.9	1.99E+13	9.79E+20
LONGERON	36.9	1.71E+13	8.44E+20
ROW 11	51.9	1.32E+13	6.51E+20
LONGERON	66.9	8.40E+12	4.14E+20
ROW 12	81.9	3.08E+12	1.51E+20
LONGERON	96.9	9.93E+10	4.21E+18
SPACE END	89.2	9.53E+11	4.53E+19
EARTH END	-90.8	6.55E+11	3.08E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	2.14E+13	1.06E+21
SIDE DIR	90.0	7.95E+11	3.76E+19

AVERAGE ATOMIC OXYGEN DENSITY: 2.80E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 779.2 TO 1124.7 K
 ALTITUDE RANGE: 459.2 TO 470.8 KM

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*****
*DATE:      MARCH 19, 1988      DAY OF YEAR:  79 *
*CUMULATIVE EXPOSURE TIME: 1442 DAYS
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.79E+07	8.48E+14
LONGERON	126.9	5.88E+01	7.06E+09
ROW 2	141.9	7.01E-05	3.40E+04
LONGERON	156.9	8.87E-10	1.18E+00
ROW 3	171.9	1.75E-12	3.31E-03
LONGERON	173.0	2.26E-12	3.23E-03
ROW 4	158.1	1.66E-09	9.70E-01
LONGERON	143.1	1.24E-04	2.03E+04
ROW 5	128.1	5.97E+01	3.11E+09
LONGERON	113.1	1.01E+07	3.65E+14
ROW 6	98.1	5.61E+10	2.59E+18
LONGERON	83.1	2.51E+12	1.32E+20
ROW 7	68.1	7.51E+12	3.98E+20
LONGERON	53.1	1.21E+13	6.41E+20
ROW 8	38.1	1.58E+13	8.40E+20
LONGERON	23.1	1.85E+13	9.82E+20
ROW 9	8.1	1.99E+13	1.06E+21
LONGERON	7.0	2.00E+13	1.06E+21
ROW 10	21.9	1.87E+13	9.90E+20
LONGERON	36.9	1.61E+13	8.53E+20
ROW 11	51.9	1.24E+13	6.59E+20
LONGERON	66.9	7.89E+12	4.19E+20
ROW 12	81.9	2.89E+12	1.53E+20
LONGERON	96.9	8.92E+10	4.27E+18
SPACE END	89.2	8.89E+11	4.59E+19
EARTH END	-90.8	6.10E+11	3.11E+19
	CONSTANT INCIDENCE ANGLE (DEGREES)		
RAM DIR	0.0	2.01E+13	1.07E+21
SIDE DIR	90.0	7.41E+11	3.80E+19

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AVERAGE ATOMIC OXYGEN DENSITY:  2.64E+07 ATOMS/CM**3
TEMPERATURE RANGE:  778.1 TO 1091.5 K
ALTITUDE RANGE:  458.7 TO 470.8 KM

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*DATE:      MARCH 26, 1988      DAY OF YEAR:  86 *
*CUMULATIVE EXPOSURE TIME: 1449 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.98E+07	8.66E+14
LONGERON	126.9	1.34E+02	7.14E+09
ROW 2	141.9	2.45E-04	3.42E+04
LONGERON	156.9	4.93E-09	1.18E+00
ROW 3	171.9	1.40E-11	3.32E-03
LONGERON	173.0	2.04E-11	3.25E-03
ROW 4	158.1	1.29E-08	9.78E-01
LONGERON	143.1	6.73E-04	2.07E+04
ROW 5	128.1	2.05E+02	3.23E+09
LONGERON	113.1	2.08E+07	3.77E+14
ROW 6	98.1	7.56E+10	2.63E+18
LONGERON	83.1	3.04E+12	1.34E+20
ROW 7	68.1	9.07E+12	4.04E+20
LONGERON	53.1	1.46E+13	6.50E+20
ROW 8	38.1	1.91E+13	8.51E+20
LONGERON	23.1	2.23E+13	9.95E+20
ROW 9	8.1	2.40E+13	1.07E+21
LONGERON	7.0	2.41E+13	1.07E+21
ROW 10	21.9	2.25E+13	1.00E+21
LONGERON	36.9	1.94E+13	8.65E+20
ROW 11	51.9	1.50E+13	6.68E+20
LONGERON	66.9	9.52E+12	4.24E+20
ROW 12	81.9	3.49E+12	1.55E+20
LONGERON	96.9	1.16E+11	4.34E+18
SPACE END	89.2	1.09E+12	4.65E+19
EARTH END	-90.8	7.57E+11	3.16E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	2.43E+13	1.08E+21
SIDE DIR	90.0	9.15E+11	3.86E+19

AVERAGE ATOMIC OXYGEN DENSITY: 3.18E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 788.6 TO 1178.6 K
 ALTITUDE RANGE: 458.7 TO 469.1 KM

 *DATE: APRIL 2, 1988 DAY OF YEAR: 93 *
 *CUMULATIVE EXPOSURE TIME: 1456 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.94E+07	8.96E+14
LONGERON	126.9	3.61E+02	7.35E+09
ROW 2	141.9	9.94E-04	3.48E+04
LONGERON	156.9	2.29E-08	1.19E+00
ROW 3	171.9	5.78E-11	3.36E-03
LONGERON	173.1	6.58E-11	3.28E-03
ROW 4	158.1	3.10E-08	9.97E-01
LONGERON	143.1	1.27E-03	2.15E+04
ROW 5	128.1	3.29E+02	3.43E+09
LONGERON	113.1	3.01E+07	3.95E+14
ROW 6	98.1	9.49E+10	2.69E+18
LONGERON	83.1	3.57E+12	1.36E+20
ROW 7	68.1	1.06E+13	4.10E+20
LONGERON	53.1	1.71E+13	6.60E+20
ROW 8	38.1	2.24E+13	8.65E+20
LONGERON	23.1	2.62E+13	1.01E+21
ROW 9	8.1	2.82E+13	1.09E+21
LONGERON	6.9	2.83E+13	1.09E+21
ROW 10	21.9	2.64E+13	1.02E+21
LONGERON	36.9	2.28E+13	8.79E+20
ROW 11	51.9	1.76E+13	6.78E+20
LONGERON	66.9	1.12E+13	4.31E+20
ROW 12	81.9	4.11E+12	1.58E+20
LONGERON	96.9	1.46E+11	4.43E+18
SPACE END	89.2	1.30E+12	4.73E+19
EARTH END	-90.8	9.08E+11	3.21E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	2.85E+13	1.10E+21
SIDE DIR	90.0	1.09E+12	3.93E+19

AVERAGE ATOMIC OXYGEN DENSITY: 3.73E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 839.5 TO 1202.0 K
 ALTITUDE RANGE: 458.7 TO 466.9 KM

 *DATE: APRIL 9, 1988 DAY OF YEAR: 100 *
 *CUMULATIVE EXPOSURE TIME: 1463 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	5.74E+07	9.31E+14
LONGERON	126.9	6.36E+02	7.74E+09
ROW 2	141.9	2.31E-03	3.62E+04
LONGERON	156.9	4.81E-08	1.22E+00
ROW 3	171.8	8.11E-11	3.41E-03
LONGERON	173.1	5.74E-11	3.32E-03
ROW 4	158.1	1.90E-08	1.01E+00
LONGERON	143.1	6.84E-04	2.19E+04
ROW 5	128.1	2.00E+02	3.55E+09
LONGERON	113.1	2.44E+07	4.10E+14
ROW 6	98.1	9.29E+10	2.75E+18
LONGERON	83.1	3.58E+12	1.39E+20
ROW 7	68.1	1.07E+13	4.16E+20
LONGERON	53.1	1.72E+13	6.70E+20
ROW 8	38.1	2.25E+13	8.79E+20
LONGERON	23.1	2.63E+13	1.03E+21
ROW 9	8.2	2.83E+13	1.11E+21
LONGERON	6.9	2.84E+13	1.11E+21
ROW 10	21.9	2.66E+13	1.04E+21
LONGERON	36.9	2.29E+13	8.93E+20
ROW 11	51.9	1.77E+13	6.89E+20
LONGERON	66.9	1.12E+13	4.38E+20
ROW 12	81.9	4.13E+12	1.60E+20
LONGERON	96.9	1.48E+11	4.52E+18
SPACE END	89.2	1.31E+12	4.81E+19
EARTH END	-90.8	9.10E+11	3.27E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	2.86E+13	1.12E+21
SIDE DIR	90.0	1.10E+12	3.99E+19

AVERAGE ATOMIC OXYGEN DENSITY: 3.75E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 826.0 TO 1198.9 K
 ALTITUDE RANGE: 457.6 TO 469.0 KM

 *DATE: APRIL 16, 1988 DAY OF YEAR: 107 *
 *CUMULATIVE EXPOSURE TIME: 1470 DAYS *

AVERAGES AND RANGES ARE BASED ON 1751 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	7.86E+07	9.78E+14
LONGERON	126.9	1.39E+03	8.58E+09
ROW 2	141.9	6.85E-03	4.03E+04
LONGERON	156.9	1.49E-07	1.31E+00
ROW 3	171.8	2.08E-10	3.53E-03
LONGERON	173.1	1.01E-10	3.38E-03
ROW 4	158.1	2.17E-08	1.02E+00
LONGERON	143.1	5.62E-04	2.22E+04
ROW 5	128.1	1.52E+02	3.64E+09
LONGERON	113.1	2.25E+07	4.24E+14
ROW 6	98.1	9.65E+10	2.81E+18
LONGERON	83.1	3.72E+12	1.41E+20
ROW 7	68.1	1.11E+13	4.23E+20
LONGERON	53.1	1.78E+13	6.81E+20
ROW 8	38.1	2.34E+13	8.93E+20
LONGERON	23.1	2.74E+13	1.04E+21
ROW 9	8.2	2.94E+13	1.12E+21
LONGERON	6.9	2.95E+13	1.13E+21
ROW 10	21.9	2.76E+13	1.05E+21
LONGERON	36.9	2.38E+13	9.07E+20
ROW 11	51.9	1.84E+13	7.00E+20
LONGERON	66.9	1.17E+13	4.45E+20
ROW 12	81.9	4.30E+12	1.63E+20
LONGERON	96.9	1.58E+11	4.61E+18
SPACE END	89.2	1.36E+12	4.89E+19
EARTH END	-90.8	9.49E+11	3.33E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	2.97E+13	1.13E+21
SIDE DIR	90.0	1.14E+12	4.06E+19

AVERAGE ATOMIC OXYGEN DENSITY: 3.89E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 831.2 TO 1175.9 K
 ALTITUDE RANGE: 457.6 TO 469.7 KM

 *DATE: APRIL 23, 1988 DAY OF YEAR: 114 *
 *CUMULATIVE EXPOSURE TIME: 1477 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	7.38E+07	1.02E+15
LONGERON	126.9	1.08E+03	9.24E+09
ROW 2	141.9	4.46E-03	4.30E+04
LONGERON	156.9	9.60E-08	1.37E+00
ROW 3	171.9	1.61E-10	3.63E-03
LONGERON	173.1	1.05E-10	3.44E-03
ROW 4	158.1	2.89E-08	1.04E+00
LONGERON	143.1	7.91E-04	2.27E+04
ROW 5	128.1	1.86E+02	3.75E+09
LONGERON	113.1	2.34E+07	4.38E+14
ROW 6	98.1	9.64E+10	2.86E+18
LONGERON	83.1	3.71E+12	1.43E+20
ROW 7	68.1	1.11E+13	4.30E+20
LONGERON	53.1	1.78E+13	6.92E+20
ROW 8	38.1	2.33E+13	9.07E+20
LONGERON	23.1	2.73E+13	1.06E+21
ROW 9	8.1	2.94E+13	1.14E+21
LONGERON	6.9	2.94E+13	1.14E+21
ROW 10	21.9	2.75E+13	1.07E+21
LONGERON	36.9	2.37E+13	9.22E+20
ROW 11	51.9	1.83E+13	7.11E+20
LONGERON	66.9	1.16E+13	4.52E+20
ROW 12	81.9	4.28E+12	1.65E+20
LONGERON	96.9	1.56E+11	4.71E+18
SPACE END	89.2	1.36E+12	4.98E+19
EARTH END	-90.8	9.45E+11	3.38E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	2.97E+13	1.15E+21
SIDE DIR	90.0	1.14E+12	4.13E+19

AVERAGE ATOMIC OXYGEN DENSITY: 3.88E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 813.6 TO 1202.4 K
 ALTITUDE RANGE: 457.6 TO 469.0 KM

 *DATE: APRIL 30, 1988 DAY OF YEAR: 121 *
 *CUMULATIVE EXPOSURE TIME: 1484 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.63E+07	1.04E+15
LONGERON	126.9	2.55E+02	9.39E+09
ROW 2	141.9	5.94E-04	4.34E+04
LONGERON	156.9	1.09E-08	1.38E+00
ROW 3	171.9	2.32E-11	3.64E-03
LONGERON	173.0	2.46E-11	3.46E-03
ROW 4	158.1	1.18E-08	1.05E+00
LONGERON	143.1	5.18E-04	2.30E+04
ROW 5	128.1	1.53E+02	3.85E+09
LONGERON	113.1	1.79E+07	4.49E+14
ROW 6	98.1	7.57E+10	2.91E+18
LONGERON	83.1	3.09E+12	1.45E+20
ROW 7	68.1	9.21E+12	4.35E+20
LONGERON	53.1	1.48E+13	7.01E+20
ROW 8	38.1	1.94E+13	9.19E+20
LONGERON	23.1	2.27E+13	1.07E+21
ROW 9	8.1	2.44E+13	1.16E+21
LONGERON	7.0	2.45E+13	1.16E+21
ROW 10	21.9	2.29E+13	1.08E+21
LONGERON	36.9	1.97E+13	9.33E+20
ROW 11	51.9	1.52E+13	7.20E+20
LONGERON	66.9	9.68E+12	4.58E+20
ROW 12	81.9	3.55E+12	1.67E+20
LONGERON	96.9	1.19E+11	4.78E+18
SPACE END	89.2	1.11E+12	5.04E+19
EARTH END	-90.8	7.69E+11	3.43E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	2.47E+13	1.17E+21
SIDE DIR	90.0	9.30E+11	4.19E+19

AVERAGE ATOMIC OXYGEN DENSITY: 3.23E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 791.0 TO 1194.9 K
 ALTITUDE RANGE: 458.2 TO 466.4 KM

 *DATE: MAY 7, 1988 DAY OF YEAR: 128 *
 *CUMULATIVE EXPOSURE TIME: 1491 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.29E+07	1.07E+15
LONGERON	126.9	3.36E+02	9.60E+09
ROW 2	141.9	1.06E-03	4.40E+04
LONGERON	156.9	2.75E-08	1.39E+00
ROW 3	171.9	7.73E-11	3.69E-03
LONGERON	173.0	9.69E-11	3.52E-03
ROW 4	158.1	4.73E-08	1.07E+00
LONGERON	143.1	1.81E-03	2.41E+04
ROW 5	128.1	3.98E+02	4.09E+09
LONGERON	113.1	3.00E+07	4.67E+14
ROW 6	98.1	8.81E+10	2.96E+18
LONGERON	83.1	3.33E+12	1.47E+20
ROW 7	68.1	9.89E+12	4.41E+20
LONGERON	53.1	1.59E+13	7.10E+20
ROW 8	38.1	2.09E+13	9.31E+20
LONGERON	23.1	2.44E+13	1.09E+21
ROW 9	8.1	2.62E+13	1.17E+21
LONGERON	7.0	2.63E+13	1.17E+21
ROW 10	21.9	2.46E+13	1.10E+21
LONGERON	36.9	2.12E+13	9.46E+20
ROW 11	51.9	1.63E+13	7.30E+20
LONGERON	66.9	1.04E+13	4.64E+20
ROW 12	81.9	3.80E+12	1.70E+20
LONGERON	96.9	1.32E+11	4.86E+18
SPACE END	89.2	1.20E+12	5.12E+19
EARTH END	-90.8	8.40E+11	3.48E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	2.65E+13	1.18E+21
SIDE DIR	90.0	1.01E+12	4.25E+19

AVERAGE ATOMIC OXYGEN DENSITY: 3.47E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 797.8 TO 1277.6 K
 ALTITUDE RANGE: 457.1 TO 467.3 KM

 *DATE: MAY 14, 1988 DAY OF YEAR: 135 *
 *CUMULATIVE EXPOSURE TIME: 1498 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.79E+07	1.09E+15
LONGERON	126.9	2.77E+02	9.76E+09
ROW 2	141.9	7.76E-04	4.45E+04
LONGERON	156.9	1.78E-08	1.41E+00
ROW 3	171.9	4.54E-11	3.72E-03
LONGERON	173.0	5.42E-11	3.55E-03
ROW 4	158.1	2.69E-08	1.09E+00
LONGERON	143.1	1.13E-03	2.48E+04
ROW 5	128.1	2.91E+02	4.26E+09
LONGERON	113.1	2.52E+07	4.82E+14
ROW 6	98.1	7.90E+10	3.01E+18
LONGERON	83.1	3.06E+12	1.49E+20
ROW 7	68.1	9.11E+12	4.47E+20
LONGERON	53.1	1.47E+13	7.19E+20
ROW 8	38.1	1.92E+13	9.43E+20
LONGERON	23.1	2.25E+13	1.10E+21
ROW 9	8.1	2.42E+13	1.19E+21
LONGERON	7.0	2.42E+13	1.19E+21
ROW 10	21.9	2.27E+13	1.11E+21
LONGERON	36.9	1.95E+13	9.58E+20
ROW 11	51.9	1.51E+13	7.39E+20
LONGERON	66.9	9.58E+12	4.70E+20
ROW 12	81.9	3.51E+12	1.72E+20
LONGERON	96.9	1.21E+11	4.93E+18
SPACE END	89.2	1.11E+12	5.18E+19
EARTH END	-90.8	7.70E+11	3.53E+19
CONSTANT INCIDENCE ANGLE (DEGREES)			
RAM DIR	0.0	2.44E+13	1.20E+21
SIDE DIR	90.0	9.28E+11	4.30E+19

AVERAGE ATOMIC OXYGEN DENSITY: 3.20E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 777.1 TO 1272.7 K
 ALTITUDE RANGE: 457.0 TO 468.4 KM

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*DATE:      MAY 21, 1988      DAY OF YEAR: 142 *
*CUMULATIVE EXPOSURE TIME: 1505 DAYS          *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.58E+07	1.12E+15
LONGERON	126.9	3.42E+02	9.97E+09
ROW 2	141.9	1.13E-03	4.52E+04
LONGERON	156.9	2.27E-08	1.42E+00
ROW 3	171.9	3.91E-11	3.74E-03
LONGERON	173.1	2.93E-11	3.57E-03
ROW 4	158.1	1.07E-08	1.10E+00
LONGERON	143.1	4.41E-04	2.50E+04
ROW 5	128.1	1.41E+02	4.35E+09
LONGERON	113.1	1.68E+07	4.92E+14
ROW 6	98.1	6.73E+10	3.05E+18
LONGERON	83.1	2.76E+12	1.51E+20
ROW 7	68.1	8.26E+12	4.52E+20
LONGERON	53.1	1.33E+13	7.27E+20
ROW 8	38.1	1.74E+13	9.53E+20
LONGERON	23.1	2.04E+13	1.11E+21
ROW 9	8.1	2.19E+13	1.20E+21
LONGERON	6.9	2.20E+13	1.20E+21
ROW 10	21.9	2.06E+13	1.12E+21
LONGERON	36.9	1.77E+13	9.69E+20
ROW 11	51.9	1.37E+13	7.48E+20
LONGERON	66.9	8.70E+12	4.75E+20
ROW 12	81.9	3.20E+12	1.74E+20
LONGERON	96.9	1.08E+11	5.00E+18
SPACE END	89.2	9.96E+11	5.24E+19
EARTH END	-90.8	6.91E+11	3.57E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	2.22E+13	1.21E+21
SIDE DIR	90.0	8.35E+11	4.35E+19

AVERAGE ATOMIC OXYGEN DENSITY: 2.90E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 777.3 TO 1181.4 K
 ALTITUDE RANGE: 456.8 TO 468.3 KM

 *DATE: MAY 28, 1988 DAY OF YEAR: 149 *
 *CUMULATIVE EXPOSURE TIME: 1512 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	7.49E+07	1.16E+15
LONGERON	126.9	1.56E+03	1.09E+10
ROW 2	141.9	9.79E-03	5.11E+04
LONGERON	156.9	2.76E-07	1.59E+00
ROW 3	171.8	4.63E-10	4.02E-03
LONGERON	173.1	2.40E-10	3.71E-03
ROW 4	158.1	4.88E-08	1.13E+00
LONGERON	143.1	1.09E-03	2.57E+04
ROW 5	128.1	2.27E+02	4.49E+09
LONGERON	113.1	2.35E+07	5.06E+14
ROW 6	98.1	8.60E+10	3.10E+18
LONGERON	83.1	3.28E+12	1.53E+20
ROW 7	68.1	9.79E+12	4.58E+20
LONGERON	53.1	1.58E+13	7.37E+20
ROW 8	38.1	2.07E+13	9.66E+20
LONGERON	23.1	2.42E+13	1.13E+21
ROW 9	8.2	2.60E+13	1.22E+21
LONGERON	6.9	2.61E+13	1.22E+21
ROW 10	21.9	2.44E+13	1.14E+21
LONGERON	36.9	2.10E+13	9.82E+20
ROW 11	51.9	1.62E+13	7.57E+20
LONGERON	66.9	1.03E+13	4.82E+20
ROW 12	81.9	3.81E+12	1.76E+20
LONGERON	96.9	1.41E+11	5.08E+18
SPACE END	89.2	1.20E+12	5.32E+19
EARTH END	-90.8	8.42E+11	3.62E+19
	CONSTANT INCIDENCE ANGLE (DEGREES)		
RAM DIR	0.0	2.63E+13	1.23E+21
SIDE DIR	90.0	1.01E+12	4.42E+19

AVERAGE ATOMIC OXYGEN DENSITY: 3.44E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 793.0 TO 1235.5 K
 ALTITUDE RANGE: 456.8 TO 466.8 KM

 *DATE: JUNE 4, 1988 DAY OF YEAR: 156 *
 *CUMULATIVE EXPOSURE TIME: 1519 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.09E+08	1.23E+15
LONGERON	126.9	2.91E+03	1.27E+10
ROW 2	141.9	2.25E-02	6.47E+04
LONGERON	156.9	7.90E-07	2.06E+00
ROW 3	171.8	1.66E-09	5.02E-03
LONGERON	173.1	9.95E-10	4.31E-03
ROW 4	158.1	1.91E-07	1.24E+00
LONGERON	143.1	3.14E-03	2.76E+04
ROW 5	128.1	4.32E+02	4.75E+09
LONGERON	113.1	3.37E+07	5.27E+14
ROW 6	98.1	1.03E+11	3.17E+18
LONGERON	83.1	3.68E+12	1.55E+20
ROW 7	68.1	1.09E+13	4.64E+20
LONGERON	53.1	1.76E+13	7.48E+20
ROW 8	38.1	2.31E+13	9.80E+20
LONGERON	23.1	2.70E+13	1.15E+21
ROW 9	8.2	2.90E+13	1.23E+21
LONGERON	6.9	2.91E+13	1.24E+21
ROW 10	21.9	2.72E+13	1.16E+21
LONGERON	36.9	2.35E+13	9.96E+20
ROW 11	51.9	1.81E+13	7.68E+20
LONGERON	66.9	1.15E+13	4.89E+20
ROW 12	81.9	4.25E+12	1.79E+20
LONGERON	96.9	1.66E+11	5.18E+18
SPACE END	89.2	1.36E+12	5.40E+19
EARTH END	-90.8	9.56E+11	3.68E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	2.93E+13	1.25E+21
SIDE DIR	90.0	1.15E+12	4.48E+19

AVERAGE ATOMIC OXYGEN DENSITY: 3.84E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 822.2 TO 1265.6 K
 ALTITUDE RANGE: 456.8 TO 465.3 KM

 *DATE: JUNE 11, 1988 DAY OF YEAR: 163 *
 *CUMULATIVE EXPOSURE TIME: 1526 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	8.75E+07	1.28E+15
LONGERON	126.9	1.75E+03	1.37E+10
ROW 2	141.9	1.13E-02	7.15E+04
LONGERON	156.9	4.22E-07	2.32E+00
ROW 3	171.9	1.17E-09	5.73E-03
LONGERON	173.1	1.01E-09	4.93E-03
ROW 4	158.1	2.63E-07	1.40E+00
LONGERON	143.1	4.88E-03	3.06E+04
ROW 5	128.1	5.97E+02	5.11E+09
LONGERON	113.1	3.57E+07	5.48E+14
ROW 6	98.1	9.86E+10	3.22E+18
LONGERON	83.1	3.53E+12	1.57E+20
ROW 7	68.1	1.05E+13	4.71E+20
LONGERON	53.1	1.69E+13	7.58E+20
ROW 8	38.1	2.21E+13	9.93E+20
LONGERON	23.1	2.59E+13	1.16E+21
ROW 9	8.1	2.78E+13	1.25E+21
LONGERON	6.9	2.79E+13	1.25E+21
ROW 10	21.9	2.61E+13	1.17E+21
LONGERON	36.9	2.25E+13	1.01E+21
ROW 11	51.9	1.73E+13	7.79E+20
LONGERON	66.9	1.10E+13	4.95E+20
ROW 12	81.9	4.06E+12	1.81E+20
LONGERON	96.9	1.55E+11	5.28E+18
SPACE END	89.2	1.30E+12	5.48E+19
EARTH END	-90.8	9.14E+11	3.73E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	2.81E+13	1.26E+21
SIDE DIR	90.0	1.10E+12	4.55E+19

AVERAGE ATOMIC OXYGEN DENSITY: 3.68E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 831.2 TO 1276.6 K
 ALTITUDE RANGE: 456.0 TO 467.2 KM

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*DATE:      JUNE 18, 1988      DAY OF YEAR: 170 *
*CUMULATIVE EXPOSURE TIME: 1533 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.64E+07	1.31E+15
LONGERON	126.9	4.90E+02	1.40E+10
ROW 2	141.9	2.03E-03	7.28E+04
LONGERON	156.9	6.43E-08	2.36E+00
ROW 3	171.9	1.97E-10	5.85E-03
LONGERON	173.0	2.33E-10	5.07E-03
ROW 4	158.1	9.47E-08	1.46E+00
LONGERON	143.1	2.77E-03	3.22E+04
ROW 5	128.1	4.67E+02	5.39E+09
LONGERON	113.1	2.97E+07	5.66E+14
ROW 6	98.1	8.23E+10	3.27E+18
LONGERON	83.1	3.06E+12	1.59E+20
ROW 7	68.1	9.09E+12	4.76E+20
LONGERON	53.1	1.46E+13	7.67E+20
ROW 8	38.1	1.92E+13	1.00E+21
LONGERON	23.1	2.24E+13	1.17E+21
ROW 9	8.1	2.41E+13	1.26E+21
LONGERON	7.0	2.42E+13	1.27E+21
ROW 10	21.9	2.26E+13	1.18E+21
LONGERON	36.9	1.95E+13	1.02E+21
ROW 11	51.9	1.50E+13	7.88E+20
LONGERON	66.9	9.53E+12	5.01E+20
ROW 12	81.9	3.49E+12	1.83E+20
LONGERON	96.9	1.24E+11	5.35E+18
SPACE END	89.2	1.11E+12	5.54E+19
EARTH END	-90.8	7.76E+11	3.78E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	2.43E+13	1.28E+21
SIDE DIR	90.0	9.34E+11	4.61E+19

AVERAGE ATOMIC OXYGEN DENSITY: 3.18E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 803.5 TO 1267.1 K
 ALTITUDE RANGE: 455.9 TO 467.4 KM

 *DATE: JUNE 25, 1988 DAY OF YEAR: 177 *
 *CUMULATIVE EXPOSURE TIME: 1540 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	5.70E+07	1.34E+15
LONGERON	126.9	7.15E+02	1.45E+10
ROW 2	141.9	4.05E-03	7.52E+04
LONGERON	156.9	1.87E-07	2.47E+00
ROW 3	171.9	7.61E-10	6.31E-03
LONGERON	173.0	9.64E-10	5.65E-03
ROW 4	158.1	3.38E-07	1.66E+00
LONGERON	143.1	7.55E-03	3.68E+04
ROW 5	128.1	9.30E+02	5.95E+09
LONGERON	113.1	4.26E+07	5.92E+14
ROW 6	98.1	9.33E+10	3.33E+18
LONGERON	83.1	3.29E+12	1.61E+20
ROW 7	68.1	9.76E+12	4.82E+20
LONGERON	53.1	1.57E+13	7.76E+20
ROW 8	38.1	2.06E+13	1.02E+21
LONGERON	23.1	2.40E+13	1.19E+21
ROW 9	8.1	2.59E+13	1.28E+21
LONGERON	7.0	2.59E+13	1.28E+21
ROW 10	21.9	2.42E+13	1.20E+21
LONGERON	36.9	2.09E+13	1.03E+21
ROW 11	51.9	1.61E+13	7.98E+20
LONGERON	66.9	1.02E+13	5.07E+20
ROW 12	81.9	3.75E+12	1.85E+20
LONGERON	96.9	1.37E+11	5.43E+18
SPACE END	89.2	1.20E+12	5.62E+19
EARTH END	-90.8	8.44E+11	3.83E+19
CONSTANT INCIDENCE ANGLE (DEGREES)			
RAM DIR	0.0	2.61E+13	1.29E+21
SIDE DIR	90.0	1.01E+12	4.67E+19

AVERAGE ATOMIC OXYGEN DENSITY: 3.42E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 805.2 TO 1296.8 K
 ALTITUDE RANGE: 455.6 TO 466.9 KM

 *DATE: JULY 2, 1988 DAY OF YEAR: 184 *
 *CUMULATIVE EXPOSURE TIME: 1547 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.28E+08	1.42E+15
LONGERON	126.9	3.46E+03	1.66E+10
ROW 2	141.9	4.28E-02	1.01E+05
LONGERON	156.9	3.26E-06	4.44E+00
ROW 3	171.9	1.47E-08	1.52E-02
LONGERON	173.1	1.44E-08	1.44E-02
ROW 4	158.1	3.09E-06	3.53E+00
LONGERON	143.1	3.80E-02	5.98E+04
ROW 5	128.1	2.64E+03	7.55E+09
LONGERON	113.1	7.78E+07	6.39E+14
ROW 6	98.1	1.30E+11	3.41E+18
LONGERON	83.1	4.18E+12	1.63E+20
ROW 7	68.1	1.24E+13	4.90E+20
LONGERON	53.1	1.99E+13	7.88E+20
ROW 8	38.1	2.61E+13	1.03E+21
LONGERON	23.1	3.05E+13	1.21E+21
ROW 9	8.1	3.29E+13	1.30E+21
LONGERON	6.9	3.30E+13	1.30E+21
ROW 10	21.9	3.08E+13	1.22E+21
LONGERON	36.9	2.66E+13	1.05E+21
ROW 11	51.9	2.05E+13	8.10E+20
LONGERON	66.9	1.30E+13	5.15E+20
ROW 12	81.9	4.81E+12	1.88E+20
LONGERON	96.9	1.97E+11	5.55E+18
SPACE END	89.2	1.57E+12	5.71E+19
EARTH END	-90.8	1.11E+12	3.90E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	3.32E+13	1.31E+21
SIDE DIR	90.0	1.33E+12	4.75E+19

AVERAGE ATOMIC OXYGEN DENSITY: 4.35E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 853.9 TO 1358.3 K
 ALTITUDE RANGE: 456.1 TO 464.5 KM

 *DATE: JULY 9, 1988 DAY OF YEAR: 191 *
 *CUMULATIVE EXPOSURE TIME: 1554 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.36E+08	1.50E+15
LONGERON	126.9	4.43E+03	1.92E+10
ROW 2	141.9	5.48E-02	1.34E+05
LONGERON	156.9	3.32E-06	6.45E+00
ROW 3	171.8	1.07E-08	2.17E-02
LONGERON	173.1	7.80E-09	1.91E-02
ROW 4	158.1	1.39E-06	4.38E+00
LONGERON	143.1	1.70E-02	7.01E+04
ROW 5	128.1	1.42E+03	8.41E+09
LONGERON	113.1	5.80E+07	6.74E+14
ROW 6	98.1	1.23E+11	3.48E+18
LONGERON	83.1	4.10E+12	1.66E+20
ROW 7	68.1	1.22E+13	4.97E+20
LONGERON	53.1	1.96E+13	8.00E+20
ROW 8	38.1	2.57E+13	1.05E+21
LONGERON	23.1	3.00E+13	1.23E+21
ROW 9	8.2	3.23E+13	1.32E+21
LONGERON	6.9	3.24E+13	1.32E+21
ROW 10	21.9	3.03E+13	1.24E+21
LONGERON	36.9	2.61E+13	1.07E+21
ROW 11	51.9	2.02E+13	8.22E+20
LONGERON	66.9	1.28E+13	5.23E+20
ROW 12	81.9	4.74E+12	1.91E+20
LONGERON	96.9	1.94E+11	5.67E+18
SPACE END	89.2	1.54E+12	5.81E+19
EARTH END	-90.8	1.09E+12	3.96E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.27E+13	1.33E+21
SIDE DIR	90.0	1.30E+12	4.83E+19

AVERAGE ATOMIC OXYGEN DENSITY: 4.28E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 828.9 TO 1348.0 K
 ALTITUDE RANGE: 454.8 TO 465.0 KM

 *DATE: JULY 16, 1988 DAY OF YEAR: 198 *
 *CUMULATIVE EXPOSURE TIME: 1561 DAYS *

AVERAGES AND RANGES ARE BASED ON 1751 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.30E+08	1.58E+15
LONGERON	126.9	4.19E+03	2.18E+10
ROW 2	141.9	4.19E-02	1.60E+05
LONGERON	156.9	1.78E-06	7.53E+00
ROW 3	171.8	3.88E-09	2.40E-02
LONGERON	173.1	2.09E-09	2.04E-02
ROW 4	158.1	3.38E-07	4.58E+00
LONGERON	143.1	4.76E-03	7.30E+04
ROW 5	128.1	5.87E+02	8.77E+09
LONGERON	113.1	4.10E+07	6.99E+14
ROW 6	98.1	1.14E+11	3.55E+18
LONGERON	83.1	3.95E+12	1.68E+20
ROW 7	68.1	1.17E+13	5.04E+20
LONGERON	53.1	1.89E+13	8.11E+20
ROW 8	38.1	2.48E+13	1.06E+21
LONGERON	23.1	2.90E+13	1.24E+21
ROW 9	8.2	3.12E+13	1.34E+21
LONGERON	6.9	3.13E+13	1.34E+21
ROW 10	21.9	2.92E+13	1.25E+21
LONGERON	36.9	2.52E+13	1.08E+21
ROW 11	51.9	1.95E+13	8.34E+20
LONGERON	66.9	1.24E+13	5.30E+20
ROW 12	81.9	4.57E+12	1.94E+20
LONGERON	96.9	1.82E+11	5.78E+18
SPACE END	89.2	1.47E+12	5.89E+19
EARTH END	-90.8	1.04E+12	4.03E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.15E+13	1.35E+21
SIDE DIR	90.0	1.24E+12	4.90E+19

AVERAGE ATOMIC OXYGEN DENSITY: 4.13E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 830.1 TO 1297.9 K
 ALTITUDE RANGE: 454.7 TO 466.5 KM

 *DATE: JULY 23, 1988 DAY OF YEAR: 205 *
 *CUMULATIVE EXPOSURE TIME: 1568 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.38E+08	1.66E+15
LONGERON	126.9	3.97E+03	2.42E+10
ROW 2	141.9	3.53E-02	1.81E+05
LONGERON	156.9	1.53E-06	8.45E+00
ROW 3	171.8	4.01E-09	2.65E-02
LONGERON	173.1	2.80E-09	2.21E-02
ROW 4	158.1	5.42E-07	4.91E+00
LONGERON	143.1	7.57E-03	7.75E+04
ROW 5	128.1	7.86E+02	9.24E+09
LONGERON	113.1	4.66E+07	7.27E+14
ROW 6	98.1	1.23E+11	3.63E+18
LONGERON	83.1	4.20E+12	1.71E+20
ROW 7	68.1	1.25E+13	5.12E+20
LONGERON	53.1	2.01E+13	8.24E+20
ROW 8	38.1	2.63E+13	1.08E+21
LONGERON	23.1	3.07E+13	1.26E+21
ROW 9	8.2	3.31E+13	1.36E+21
LONGERON	6.9	3.32E+13	1.36E+21
ROW 10	21.9	3.10E+13	1.27E+21
LONGERON	36.9	2.67E+13	1.10E+21
ROW 11	51.9	2.06E+13	8.46E+20
LONGERON	66.9	1.31E+13	5.38E+20
ROW 12	81.9	4.84E+12	1.97E+20
LONGERON	96.9	1.96E+11	5.90E+18
SPACE END	89.2	1.57E+12	5.99E+19
EARTH END	-90.8	1.10E+12	4.09E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	3.34E+13	1.37E+21
SIDE DIR	90.0	1.32E+12	4.98E+19

AVERAGE ATOMIC OXYGEN DENSITY: 4.38E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 842.4 TO 1312.6 K
 ALTITUDE RANGE: 454.5 TO 466.5 KM

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*DATE:      JULY 30, 1988      DAY OF YEAR: 212 *
*CUMULATIVE EXPOSURE TIME: 1575 DAYS
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.36E+08	1.75E+15
LONGERON	126.9	3.30E+03	2.62E+10
ROW 2	141.9	3.18E-02	2.00E+05
LONGERON	156.9	2.01E-06	9.67E+00
ROW 3	171.9	8.81E-09	3.18E-02
LONGERON	173.0	9.51E-09	2.78E-02
ROW 4	158.1	2.25E-06	6.27E+00
LONGERON	143.1	2.85E-02	9.48E+04
ROW 5	128.1	1.99E+03	1.04E+10
LONGERON	113.1	6.81E+07	7.68E+14
ROW 6	98.1	1.37E+11	3.71E+18
LONGERON	83.1	4.54E+12	1.73E+20
ROW 7	68.1	1.34E+13	5.20E+20
LONGERON	53.1	2.16E+13	8.37E+20
ROW 8	38.1	2.83E+13	1.10E+21
LONGERON	23.1	3.31E+13	1.28E+21
ROW 9	8.1	3.56E+13	1.38E+21
LONGERON	7.0	3.57E+13	1.38E+21
ROW 10	21.9	3.34E+13	1.29E+21
LONGERON	36.9	2.88E+13	1.11E+21
ROW 11	51.9	2.22E+13	8.60E+20
LONGERON	66.9	1.41E+13	5.47E+20
ROW 12	81.9	5.20E+12	2.00E+20
LONGERON	96.9	2.11E+11	6.03E+18

SPACE END	89.2	1.70E+12	6.09E+19
EARTH END	-90.8	1.20E+12	4.16E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.60E+13	1.39E+21
SIDE DIR	90.0	1.43E+12	5.07E+19

AVERAGE ATOMIC OXYGEN DENSITY: 4.71E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 854.9 TO 1334.3 K
 ALTITUDE RANGE: 454.5 TO 465.2 KM

 *DATE: AUGUST 6, 1988 DAY OF YEAR: 219 *
 *CUMULATIVE EXPOSURE TIME: 1582 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.01E+08	1.81E+15
LONGERON	126.9	1.72E+03	2.72E+10
ROW 2	141.9	1.50E-02	2.09E+05
LONGERON	156.9	1.08E-06	1.03E+01
ROW 3	171.9	5.82E-09	3.53E-02
LONGERON	173.0	7.81E-09	3.25E-02
ROW 4	158.1	2.26E-06	7.64E+00
LONGERON	143.1	3.35E-02	1.15E+05
ROW 5	128.1	2.47E+03	1.19E+10
LONGERON	113.1	7.46E+07	8.14E+14
ROW 6	98.1	1.34E+11	3.79E+18
LONGERON	83.1	4.44E+12	1.76E+20
ROW 7	68.1	1.31E+13	5.28E+20
LONGERON	53.1	2.11E+13	8.49E+20
ROW 8	38.1	2.77E+13	1.11E+21
LONGERON	23.1	3.23E+13	1.30E+21
ROW 9	8.1	3.48E+13	1.40E+21
LONGERON	7.0	3.49E+13	1.40E+21
ROW 10	21.9	3.26E+13	1.31E+21
LONGERON	36.9	2.81E+13	1.13E+21
ROW 11	51.9	2.17E+13	8.73E+20
LONGERON	66.9	1.38E+13	5.55E+20
ROW 12	81.9	5.06E+12	2.03E+20
LONGERON	96.9	1.97E+11	6.15E+18
SPACE END	89.2	1.64E+12	6.19E+19
EARTH END	-90.8	1.16E+12	4.23E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.51E+13	1.42E+21
SIDE DIR	90.0	1.39E+12	5.15E+19

AVERAGE ATOMIC OXYGEN DENSITY: 4.60E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 875.5 TO 1321.4 K
 ALTITUDE RANGE: 455.1 TO 462.7 KM

 *DATE: AUGUST 13, 1988 DAY OF YEAR: 226 *
 *CUMULATIVE EXPOSURE TIME: 1589 DAYS *

AVERAGES AND RANGES ARE BASED ON 1/50 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.04E+08	1.87E+15
LONGERON	126.9	1.63E+03	2.82E+10
ROW 2	141.9	1.24E-02	2.17E+05
LONGERON	156.9	7.95E-07	1.08E+01
ROW 3	171.9	3.99E-09	3.77E-02
LONGERON	173.0	5.25E-09	3.57E-02
ROW 4	158.1	1.59E-06	8.60E+00
LONGERON	143.1	2.64E-02	1.31E+05
ROW 5	128.1	2.25E+03	1.33E+10
LONGERON	113.1	7.53E+07	8.59E+14
ROW 6	98.1	1.38E+11	3.87E+18
LONGERON	83.1	4.59E+12	1.79E+20
ROW 7	68.1	1.36E+13	5.36E+20
LONGERON	53.1	2.19E+13	8.63E+20
ROW 8	38.1	2.86E+13	1.13E+21
LONGERON	23.1	3.35E+13	1.32E+21
ROW 9	8.1	3.60E+13	1.42E+21
LONGERON	7.0	3.61E+13	1.43E+21
ROW 10	21.9	3.38E+13	1.33E+21
LONGERON	36.9	2.91E+13	1.15E+21
ROW 11	51.9	2.24E+13	8.87E+20
LONGERON	66.9	1.43E+13	5.64E+20
ROW 12	81.9	5.25E+12	2.06E+20
LONGERON	96.9	2.05E+11	6.27E+18
SPACE END	89.2	1.70E+12	6.29E+19
EARTH END	-90.8	1.20E+12	4.31E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.64E+13	1.44E+21
SIDE DIR	90.0	1.44E+12	5.24E+19

AVERAGE ATOMIC OXYGEN DENSITY: 4.76E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 874.6 TO 1289.5 K
 ALTITUDE RANGE: 453.8 TO 464.5 KM

 *DATE: AUGUST 20, 1988 DAY OF YEAR: 233 *
 *CUMULATIVE EXPOSURE TIME: 1596 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	8.14E+07	1.92E+15
LONGERON	126.9	1.17E+03	2.89E+10
ROW 2	141.9	6.95E-03	2.21E+05
LONGERON	156.9	2.89E-07	1.10E+01
ROW 3	171.9	9.61E-10	3.83E-02
LONGERON	173.1	9.83E-10	3.63E-02
ROW 4	158.1	2.91E-07	8.78E+00
LONGERON	143.1	6.02E-03	1.35E+05
ROW 5	128.1	7.85E+02	1.38E+10
LONGERON	113.1	4.43E+07	8.86E+14
ROW 6	98.1	1.16E+11	3.94E+18
LONGERON	83.1	4.21E+12	1.81E+20
ROW 7	68.1	1.25E+13	5.43E+20
LONGERON	53.1	2.02E+13	8.75E+20
ROW 8	38.1	2.64E+13	1.15E+21
LONGERON	23.1	3.09E+13	1.34E+21
ROW 9	8.1	3.33E+13	1.44E+21
LONGERON	6.9	3.34E+13	1.45E+21
ROW 10	21.9	3.12E+13	1.35E+21
LONGERON	36.9	2.69E+13	1.17E+21
ROW 11	51.9	2.07E+13	8.99E+20
LONGERON	66.9	1.32E+13	5.72E+20
ROW 12	81.9	4.86E+12	2.09E+20
LONGERON	96.9	1.82E+11	6.38E+18
SPACE END	89.2	1.55E+12	6.39E+19
EARTH END	-90.8	1.09E+12	4.37E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.36E+13	1.46E+21
SIDE DIR	90.0	1.31E+12	5.32E+19

AVERAGE ATOMIC OXYGEN DENSITY: 4.40E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 829.4 TO 1276.6 K
 ALTITUDE RANGE: 453.8 TO 465.1 KM

 *DATE: AUGUST 27, 1988 DAY OF YEAR: 240 *
 *CUMULATIVE EXPOSURE TIME: 1603 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.64E+08	2.02E+15
LONGERON	126.9	5.76E+03	3.24E+10
ROW 2	141.9	7.59E-02	2.67E+05
LONGERON	156.9	4.29E-06	1.36E+01
ROW 3	171.8	1.10E-08	4.50E-02
LONGERON	173.1	5.94E-09	3.99E-02
ROW 4	158.1	8.40E-07	9.29E+00
LONGERON	143.1	9.73E-03	1.41E+05
ROW 5	128.1	9.81E+02	1.44E+10
LONGERON	113.1	5.83E+07	9.21E+14
ROW 6	98.1	1.50E+11	4.04E+18
LONGERON	83.1	5.14E+12	1.85E+20
ROW 7	68.1	1.52E+13	5.53E+20
LONGERON	53.1	2.45E+13	8.90E+20
ROW 8	38.1	3.22E+13	1.17E+21
LONGERON	23.1	3.76E+13	1.36E+21
ROW 9	8.2	4.05E+13	1.47E+21
LONGERON	6.9	4.06E+13	1.47E+21
ROW 10	21.9	3.79E+13	1.37E+21
LONGERON	36.9	3.27E+13	1.18E+21
ROW 11	51.9	2.52E+13	9.14E+20
LONGERON	66.9	1.60E+13	5.81E+20
ROW 12	81.9	5.92E+12	2.13E+20
LONGERON	96.9	2.37E+11	6.52E+18
SPACE END	89.2	1.92E+12	6.50E+19
EARTH END	-90.8	1.35E+12	4.46E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	4.09E+13	1.48E+21
SIDE DIR	90.0	1.62E+12	5.42E+19

AVERAGE ATOMIC OXYGEN DENSITY: 5.35E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 828.7 TO 1295.7 K
 ALTITUDE RANGE: 453.4 TO 464.9 KM

 *DATE: SEPTEMBER 3, 1988 DAY OF YEAR: 247 *
 *CUMULATIVE EXPOSURE TIME: 1610 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.11E+08	2.21E+15
LONGERON	126.9	1.57E+04	4.19E+10
ROW 2	141.9	2.69E-01	4.30E+05
LONGERON	156.9	1.82E-05	2.45E+01
ROW 3	171.8	5.16E-08	7.62E-02
LONGERON	173.1	2.76E-08	5.66E-02
ROW 4	158.1	3.34E-06	1.13E+01
LONGERON	143.1	2.86E-02	1.58E+05
ROW 5	128.1	2.09E+03	1.56E+10
LONGERON	113.1	1.00E+08	9.82E+14
ROW 6	98.1	2.12E+11	4.16E+18
LONGERON	83.1	6.64E+12	1.89E+20
ROW 7	68.1	1.96E+13	5.65E+20
LONGERON	53.1	3.16E+13	9.09E+20
ROW 8	38.1	4.14E+13	1.19E+21
LONGERON	23.1	4.84E+13	1.39E+21
ROW 9	8.2	5.21E+13	1.50E+21
LONGERON	6.9	5.23E+13	1.50E+21
ROW 10	21.9	4.88E+13	1.40E+21
LONGERON	36.9	4.21E+13	1.21E+21
ROW 11	51.9	3.25E+13	9.34E+20
LONGERON	66.9	2.07E+13	5.94E+20
ROW 12	81.9	7.65E+12	2.17E+20
LONGERON	96.9	3.32E+11	6.72E+18
SPACE END	89.2	2.52E+12	6.66E+19
EARTH END	-90.8	1.79E+12	4.56E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	5.27E+13	1.51E+21
SIDE DIR	90.0	2.13E+12	5.55E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.89E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 906.7 TO 1307.5 K
 ALTITUDE RANGE: 453.5 TO 462.8 KM

 *DATE: SEPTEMBER 10, 1988 DAY OF YEAR: 254 *
 *CUMULATIVE EXPOSURE TIME: 1617 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.99E+08	2.33E+15
LONGERON	126.9	5.91E+03	4.55E+10
ROW 2	141.9	6.59E-02	4.70E+05
LONGERON	156.9	3.79E-06	2.68E+01
ROW 3	171.9	1.21E-08	8.35E-02
LONGERON	173.1	8.62E-09	6.18E-02
ROW 4	158.1	1.47E-06	1.22E+01
LONGERON	143.1	1.68E-02	1.68E+05
ROW 5	128.1	1.43E+03	1.65E+10
LONGERON	113.1	7.52E+07	1.03E+15
ROW 6	98.1	1.85E+11	4.28E+18
LONGERON	83.1	6.17E+12	1.92E+20
ROW 7	68.1	1.83E+13	5.76E+20
LONGERON	53.1	2.94E+13	9.27E+20
ROW 8	38.1	3.85E+13	1.21E+21
LONGERON	23.1	4.50E+13	1.42E+21
ROW 9	8.1	4.85E+13	1.53E+21
LONGERON	6.9	4.86E+13	1.53E+21
ROW 10	21.9	4.54E+13	1.43E+21
LONGERON	36.9	3.92E+13	1.23E+21
ROW 11	51.9	3.02E+13	9.52E+20
LONGERON	66.9	1.92E+13	6.06E+20
ROW 12	81.9	7.09E+12	2.22E+20
LONGERON	96.9	2.88E+11	6.90E+18
SPACE END	89.2	2.31E+12	6.80E+19
EARTH END	-90.8	1.63E+12	4.66E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	4.90E+13	1.54E+21
SIDE DIR	90.0	1.95E+12	5.66E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.41E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 858.1 TO 1295.1 K
 ALTITUDE RANGE: 452.7 TO 462.0 KM

 *DATE: SEPTEMBER 17, 1988 DAY OF YEAR: 261 *
 *CUMULATIVE EXPOSURE TIME: 1624 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.14E+08	2.40E+15
LONGERON	126.9	1.44E+03	4.63E+10
ROW 2	141.9	7.65E-03	4.74E+05
LONGERON	156.9	3.45E-07	2.71E+01
ROW 3	171.9	1.39E-09	8.43E-02
LONGERON	173.0	1.72E-09	6.29E-02
ROW 4	158.1	5.75E-07	1.25E+01
LONGERON	143.1	1.17E-02	1.75E+05
ROW 5	128.1	1.31E+03	1.73E+10
LONGERON	113.1	6.50E+07	1.07E+15
ROW 6	98.1	1.61E+11	4.37E+18
LONGERON	83.1	5.64E+12	1.96E+20
ROW 7	68.1	1.67E+13	5.86E+20
LONGERON	53.1	2.69E+13	9.43E+20
ROW 8	38.1	3.53E+13	1.24E+21
LONGERON	23.1	4.12E+13	1.44E+21
ROW 9	8.1	4.44E+13	1.55E+21
LONGERON	7.0	4.45E+13	1.56E+21
ROW 10	21.9	4.16E+13	1.46E+21
LONGERON	36.9	3.58E+13	1.26E+21
ROW 11	51.9	2.76E+13	9.69E+20
LONGERON	66.9	1.76E+13	6.16E+20
ROW 12	81.9	6.47E+12	2.26E+20
LONGERON	96.9	2.46E+11	7.05E+18
SPACE END	89.2	2.08E+12	6.92E+19
EARTH END	-90.8	1.46E+12	4.75E+19
	CONSTANT INCIDENCE ANGLE (DEGREES)		
RAM DIR	0.0	4.48E+13	1.57E+21
SIDE DIR	90.0	1.75E+12	5.77E+19

AVERAGE ATOMIC OXYGEN DENSITY: 5.87E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 854.0 TO 1239.8 K
 ALTITUDE RANGE: 452.4 TO 463.3 KM

 *DATE: SEPTEMBER 24, 1988 DAY OF YEAR: 268 *
 *CUMULATIVE EXPOSURE TIME: 1631 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.60E+08	2.49E+15
LONGERON	126.9	2.39E+03	4.78E+10
ROW 2	141.9	1.91E-02	4.86E+05
LONGERON	156.9	1.58E-06	2.80E+01
ROW 3	171.9	9.96E-09	9.03E-02
LONGERON	173.0	1.45E-08	7.16E-02
ROW 4	158.1	4.20E-06	1.51E+01
LONGERON	143.1	5.84E-02	2.10E+05
ROW 5	128.1	3.94E+03	1.97E+10
LONGERON	113.1	1.14E+08	1.14E+15
ROW 6	98.1	2.02E+11	4.50E+18
LONGERON	83.1	6.58E+12	2.00E+20
ROW 7	68.1	1.95E+13	5.97E+20
LONGERON	53.1	3.13E+13	9.62E+20
ROW 8	38.1	4.10E+13	1.26E+21
LONGERON	23.1	4.80E+13	1.47E+21
ROW 9	8.1	5.16E+13	1.59E+21
LONGERON	7.0	5.18E+13	1.59E+21
ROW 10	21.9	4.84E+13	1.49E+21
LONGERON	36.9	4.17E+13	1.28E+21
ROW 11	51.9	3.22E+13	9.88E+20
LONGERON	66.9	2.04E+13	6.28E+20
ROW 12	81.9	7.53E+12	2.30E+20
LONGERON	96.9	3.02E+11	7.23E+18
SPACE END	89.2	2.45E+12	7.07E+19
EARTH END	-90.8	1.74E+12	4.86E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	5.21E+13	1.60E+21
SIDE DIR	90.0	2.07E+12	5.90E+19

AVERAGE ATOMIC OXYGEN DENSITY: 6.82E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 883.7 TO 1284.3 K
 ALTITUDE RANGE: 451.6 TO 463.3 KM

 *DATE: OCTOBER 1, 1988 DAY OF YEAR: 275 *
 *CUMULATIVE EXPOSURE TIME: 1638 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.95E+08	2.61E+15
LONGERON	126.9	3.63E+03	5.00E+10
ROW 2	141.9	4.12E-02	5.11E+05
LONGERON	156.9	4.09E-06	3.05E+01
ROW 3	171.9	2.57E-08	1.06E-01
LONGERON	173.0	3.31E-08	9.17E-02
ROW 4	158.1	8.04E-06	1.99E+01
LONGERON	143.1	9.22E-02	2.66E+05
ROW 5	128.1	5.23E+03	2.28E+10
LONGERON	113.1	1.35E+08	1.22E+15
ROW 6	98.1	2.25E+11	4.63E+18
LONGERON	83.1	7.17E+12	2.04E+20
ROW 7	68.1	2.12E+13	6.10E+20
LONGERON	53.1	3.41E+13	9.82E+20
ROW 8	38.1	4.47E+13	1.29E+21
LONGERON	23.1	5.23E+13	1.51E+21
ROW 9	8.1	5.63E+13	1.62E+21
LONGERON	7.0	5.64E+13	1.62E+21
ROW 10	21.9	5.27E+13	1.52E+21
LONGERON	36.9	4.54E+13	1.31E+21
ROW 11	51.9	3.50E+13	1.01E+21
LONGERON	66.9	2.23E+13	6.42E+20
ROW 12	81.9	8.22E+12	2.35E+20
LONGERON	96.9	3.37E+11	7.43E+18
SPACE END	89.2	2.69E+12	7.23E+19
EARTH END	-90.8	1.91E+12	4.97E+19
	CONSTANT INCIDENCE ANGLE (DEGREES)		
RAM DIR	0.0	5.68E+13	1.64E+21
SIDE DIR	90.0	2.28E+12	6.03E+19

AVERAGE ATOMIC OXYGEN DENSITY: 7.44E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 923.4 TO 1299.6 K
 ALTITUDE RANGE: 451.5 TO 462.1 KM

 *DATE: OCTOBER 8, 1988 DAY OF YEAR: 282 *
 *CUMULATIVE EXPOSURE TIME: 1645 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.75E+08	2.84E+15
LONGERON	126.9	1.54E+04	5.93E+10
ROW 2	141.9	3.10E-01	6.98E+05
LONGERON	156.9	3.38E-05	5.09E+01
ROW 3	171.8	1.72E-07	2.10E-01
LONGERON	173.1	1.49E-07	1.82E-01
ROW 4	158.1	2.28E-05	3.38E+01
LONGERON	143.1	1.76E-01	3.73E+05
ROW 5	128.1	7.97E+03	2.76E+10
LONGERON	113.1	1.96E+08	1.34E+15
ROW 6	98.1	2.93E+11	4.81E+18
LONGERON	83.1	8.64E+12	2.09E+20
ROW 7	68.1	2.55E+13	6.26E+20
LONGERON	53.1	4.10E+13	1.01E+21
ROW 8	38.1	5.37E+13	1.32E+21
LONGERON	23.1	6.28E+13	1.54E+21
ROW 9	8.2	6.76E+13	1.66E+21
LONGERON	6.9	6.78E+13	1.67E+21
ROW 10	21.9	6.34E+13	1.56E+21
LONGERON	36.9	5.46E+13	1.34E+21
ROW 11	51.9	4.21E+13	1.04E+21
LONGERON	66.9	2.68E+13	6.58E+20
ROW 12	81.9	9.92E+12	2.41E+20
LONGERON	96.9	4.41E+11	7.70E+18
SPACE END	89.2	3.30E+12	7.43E+19
EARTH END	-90.8	2.35E+12	5.11E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.83E+13	1.68E+21
SIDE DIR	90.0	2.80E+12	6.20E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.94E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 936.3 TO 1387.4 K
 ALTITUDE RANGE: 451.4 TO 459.5 KM

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*DATE:    OCTOBER 15, 1988          DAY OF YEAR: 289 *
*CUMULATIVE EXPOSURE TIME: 1652 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.30E+08	3.10E+15
LONGERON	126.9	2.27E+04	7.30E+10
ROW 2	141.9	4.47E-01	9.69E+05
LONGERON	156.9	3.67E-05	7.31E+01
ROW 3	171.8	1.28E-07	2.87E-01
LONGERON	173.1	7.94E-08	2.30E-01
ROW 4	158.1	1.00E-05	3.98E+01
LONGERON	143.1	7.87E-02	4.20E+05
ROW 5	128.1	4.58E+03	3.04E+10
LONGERON	113.1	1.63E+08	1.43E+15
ROW 6	98.1	2.90E+11	4.98E+18
LONGERON	83.1	8.75E+12	2.15E+20
ROW 7	68.1	2.58E+13	6.41E+20
LONGERON	53.1	4.16E+13	1.03E+21
ROW 8	38.1	5.45E+13	1.35E+21
LONGERON	23.1	6.37E+13	1.58E+21
ROW 9	8.2	6.85E+13	1.70E+21
LONGERON	6.9	6.87E+13	1.71E+21
ROW 10	21.9	6.42E+13	1.60E+21
LONGERON	36.9	5.54E+13	1.38E+21
ROW 11	51.9	4.27E+13	1.06E+21
LONGERON	66.9	2.72E+13	6.75E+20
ROW 12	81.9	1.01E+13	2.47E+20
LONGERON	96.9	4.48E+11	7.97E+18
SPACE END	89.2	3.34E+12	7.63E+19
EARTH END	-90.8	2.38E+12	5.26E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.93E+13	1.72E+21
SIDE DIR	90.0	2.83E+12	6.37E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.06E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 916.2 TO 1382.1 K
 ALTITUDE RANGE: 449.8 TO 460.6 KM

 *DATE: OCTOBER 22, 1988 DAY OF YEAR: 296 *
 *CUMULATIVE EXPOSURE TIME: 1659 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.63E+08	3.32E+15
LONGERON	126.9	1.74E+04	8.35E+10
ROW 2	141.9	2.83E-01	1.14E+06
LONGERON	156.9	1.85E-05	8.43E+01
ROW 3	171.8	5.23E-08	3.19E-01
LONGERON	173.1	2.87E-08	2.47E-01
ROW 4	158.1	3.67E-06	4.20E+01
LONGERON	143.1	3.33E-02	4.40E+05
ROW 5	128.1	2.48E+03	3.19E+10
LONGERON	113.1	1.19E+08	1.51E+15
ROW 6	98.1	2.60E+11	5.14E+18
LONGERON	83.1	8.23E+12	2.19E+20
ROW 7	68.1	2.43E+13	6.56E+20
LONGERON	53.1	3.92E+13	1.06E+21
ROW 8	38.1	5.14E+13	1.38E+21
LONGERON	23.1	6.00E+13	1.62E+21
ROW 9	8.2	6.46E+13	1.74E+21
LONGERON	6.9	6.48E+13	1.75E+21
ROW 10	21.9	6.06E+13	1.63E+21
LONGERON	36.9	5.22E+13	1.41E+21
ROW 11	51.9	4.03E+13	1.09E+21
LONGERON	66.9	2.56E+13	6.90E+20
ROW 12	81.9	9.47E+12	2.53E+20
LONGERON	96.9	4.06E+11	8.22E+18
SPACE END	89.2	3.12E+12	7.82E+19
EARTH END	-90.8	2.21E+12	5.39E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.53E+13	1.76E+21
SIDE DIR	90.0	2.64E+12	6.53E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.54E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 912.1 TO 1327.3 K
 ALTITUDE RANGE: 449.0 TO 460.6 KM

 *DATE: OCTOBER 29, 1988 DAY OF YEAR: 303 *
 *CUMULATIVE EXPOSURE TIME: 1666 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.73E+08	3.48E+15
LONGERON	126.9	9.16E+03	8.91E+10
ROW 2	141.9	1.18E-01	1.21E+06
LONGERON	156.9	8.00E-06	8.92E+01
ROW 3	171.9	3.05E-08	3.37E-01
LONGERON	173.0	2.52E-08	2.63E-01
ROW 4	158.1	4.55E-06	4.48E+01
LONGERON	143.1	4.77E-02	4.69E+05
ROW 5	128.1	3.12E+03	3.38E+10
LONGERON	113.1	1.16E+08	1.58E+15
ROW 6	98.1	2.42E+11	5.29E+18
LONGERON	83.1	7.85E+12	2.24E+20
ROW 7	68.1	2.32E+13	6.70E+20
LONGERON	53.1	3.74E+13	1.08E+21
ROW 8	38.1	4.90E+13	1.41E+21
LONGERON	23.1	5.72E+13	1.65E+21
ROW 9	8.1	6.16E+13	1.78E+21
LONGERON	7.0	6.17E+13	1.78E+21
ROW 10	21.9	5.77E+13	1.67E+21
LONGERON	36.9	4.97E+13	1.44E+21
ROW 11	51.9	3.84E+13	1.11E+21
LONGERON	66.9	2.44E+13	7.05E+20
ROW 12	81.9	9.00E+12	2.58E+20
LONGERON	96.9	3.72E+11	8.44E+18

SPACE END	89.2	2.95E+12	8.00E+19
EARTH END	-90.8	2.08E+12	5.52E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.22E+13	1.80E+21
SIDE DIR	90.0	2.49E+12	6.68E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.14E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 906.7 TO 1325.2 K
 ALTITUDE RANGE: 448.5 TO 459.4 KM

 *DATE: NOVEMBER 5, 1988 DAY OF YEAR: 310 *
 *CUMULATIVE EXPOSURE TIME: 1673 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.77E+08	3.65E+15
LONGERON	126.9	8.50E+03	9.42E+10
ROW 2	141.9	1.17E-01	1.28E+06
LONGERON	156.9	9.75E-06	9.51E+01
ROW 3	171.9	5.05E-08	3.68E-01
LONGERON	173.0	5.76E-08	2.97E-01
ROW 4	158.1	1.27E-05	5.25E+01
LONGERON	143.1	1.32E-01	5.49E+05
ROW 5	128.1	6.81E+03	3.79E+10
LONGERON	113.1	1.62E+08	1.68E+15
ROW 6	98.1	2.57E+11	5.44E+18
LONGERON	83.1	8.10E+12	2.29E+20
ROW 7	68.1	2.39E+13	6.85E+20
LONGERON	53.1	3.85E+13	1.10E+21
ROW 8	38.1	5.05E+13	1.44E+21
LONGERON	23.1	5.90E+13	1.69E+21
ROW 9	8.1	6.35E+13	1.82E+21
LONGERON	7.0	6.37E+13	1.82E+21
ROW 10	21.9	5.95E+13	1.70E+21
LONGERON	36.9	5.13E+13	1.47E+21
ROW 11	51.9	3.96E+13	1.13E+21
LONGERON	66.9	2.52E+13	7.20E+20
ROW 12	81.9	9.29E+12	2.64E+20
LONGERON	96.9	3.89E+11	8.68E+18
SPACE END	89.2	3.05E+12	8.18E+19
EARTH END	-90.8	2.16E+12	5.65E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	6.41E+13	1.84E+21
SIDE DIR	90.0	2.58E+12	6.84E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.39E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 912.7 TO 1397.2 K
 ALTITUDE RANGE: 448.6 TO 456.9 KM

 *DATE: NOVEMBER 12, 1988 DAY OF YEAR: 317 *
 *CUMULATIVE EXPOSURE TIME: 1680 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.80E+08	3.82E+15
LONGERON	126.9	7.88E+03	9.90E+10
ROW 2	141.9	1.13E-01	1.35E+06
LONGERON	156.9	1.11E-05	1.02E+02
ROW 3	171.9	6.80E-08	4.09E-01
LONGERON	173.0	8.67E-08	3.50E-01
ROW 4	158.1	1.97E-05	6.44E+01
LONGERON	143.1	1.99E-01	6.69E+05
ROW 5	128.1	9.46E+03	4.36E+10
LONGERON	113.1	1.94E+08	1.79E+15
ROW 6	98.1	2.71E+11	5.61E+18
LONGERON	83.1	8.34E+12	2.34E+20
ROW 7	68.1	2.46E+13	6.99E+20
LONGERON	53.1	3.96E+13	1.13E+21
ROW 8	38.1	5.20E+13	1.48E+21
LONGERON	23.1	6.07E+13	1.72E+21
ROW 9	8.1	6.54E+13	1.86E+21
LONGERON	7.0	6.55E+13	1.86E+21
ROW 10	21.9	6.12E+13	1.74E+21
LONGERON	36.9	5.28E+13	1.50E+21
ROW 11	51.9	4.07E+13	1.16E+21
LONGERON	66.9	2.59E+13	7.36E+20
ROW 12	81.9	9.56E+12	2.70E+20
LONGERON	96.9	4.03E+11	8.92E+18
SPACE END	89.2	3.14E+12	8.37E+19
EARTH END	-90.8	2.23E+12	5.78E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.60E+13	1.88E+21
SIDE DIR	90.0	2.66E+12	7.00E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.64E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 913.7 TO 1400.3 K
 ALTITUDE RANGE: 446.8 TO 455.8 KM

 *DATE: NOVEMBER 19, 1988 DAY OF YEAR: 324 *
 *CUMULATIVE EXPOSURE TIME: 1687 DAYS *

AVERAGES AND RANGES ARE BASED ON 1751 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.76E+08	3.99E+15
LONGERON	126.9	8.10E+03	1.04E+11
ROW 2	141.9	1.30E-01	1.43E+06
LONGERON	156.9	1.46E-05	1.11E+02
ROW 3	171.9	9.26E-08	4.65E-01
LONGERON	173.1	1.08E-07	4.15E-01
ROW 4	158.1	2.13E-05	7.73E+01
LONGERON	143.1	1.91E-01	7.85E+05
ROW 5	128.1	8.77E+03	4.89E+10
LONGERON	113.1	1.86E+08	1.91E+15
ROW 6	98.1	2.67E+11	5.77E+18
LONGERON	83.1	8.26E+12	2.39E+20
ROW 7	68.1	2.44E+13	7.14E+20
LONGERON	53.1	3.93E+13	1.15E+21
ROW 8	38.1	5.15E+13	1.51E+21
LONGERON	23.1	6.02E+13	1.76E+21
ROW 9	8.1	6.48E+13	1.90E+21
LONGERON	6.9	6.49E+13	1.90E+21
ROW 10	21.9	6.07E+13	1.78E+21
LONGERON	36.9	5.23E+13	1.53E+21
ROW 11	51.9	4.04E+13	1.18E+21
LONGERON	66.9	2.57E+13	7.51E+20
ROW 12	81.9	9.48E+12	2.76E+20
LONGERON	96.9	3.98E+11	9.16E+18
SPACE END	89.2	3.11E+12	8.56E+19
EARTH END	-90.8	2.21E+12	5.92E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.54E+13	1.92E+21
SIDE DIR	90.0	2.64E+12	7.16E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.55E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 909.3 TO 1422.9 K
 ALTITUDE RANGE: 446.5 TO 456.8 KM

 *DATE: NOVEMBER 26, 1988 DAY OF YEAR: 331 *
 *CUMULATIVE EXPOSURE TIME: 1694 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.92E+08	4.16E+15
LONGERON	126.9	1.11E+04	1.11E+11
ROW 2	141.9	1.81E-01	1.54E+06
LONGERON	156.9	1.58E-05	1.20E+02
ROW 3	171.8	7.08E-08	5.08E-01
LONGERON	173.1	6.02E-08	4.51E-01
ROW 4	158.1	9.91E-06	8.33E+01
LONGERON	143.1	8.93E-02	8.39E+05
ROW 5	128.1	4.91E+03	5.19E+10
LONGERON	113.1	1.41E+08	1.99E+15
ROW 6	98.1	2.47E+11	5.92E+18
LONGERON	83.1	7.87E+12	2.44E+20
ROW 7	68.1	2.33E+13	7.28E+20
LONGERON	53.1	3.75E+13	1.17E+21
ROW 8	38.1	4.92E+13	1.54E+21
LONGERON	23.1	5.75E+13	1.80E+21
ROW 9	8.2	6.19E+13	1.93E+21
LONGERON	6.9	6.20E+13	1.94E+21
ROW 10	21.9	5.80E+13	1.81E+21
LONGERON	36.9	5.00E+13	1.56E+21
ROW 11	51.9	3.86E+13	1.20E+21
LONGERON	66.9	2.45E+13	7.66E+20
ROW 12	81.9	9.07E+12	2.81E+20
LONGERON	96.9	3.79E+11	9.39E+18
SPACE END	89.2	2.97E+12	8.74E+19
EARTH END	-90.8	2.10E+12	6.04E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.25E+13	1.95E+21
SIDE DIR	90.0	2.51E+12	7.31E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.17E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 867.8 TO 1420.0 K
 ALTITUDE RANGE: 446.3 TO 456.9 KM

 *DATE: DECEMBER 3, 1988 DAY OF YEAR: 338 *
 *CUMULATIVE EXPOSURE TIME: 1701 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.48E+08	4.43E+15
LONGERON	126.9	2.92E+04	1.28E+11
ROW 2	141.9	6.90E-01	1.96E+06
LONGERON	156.9	6.57E-05	1.60E+02
ROW 3	171.8	2.46E-07	6.56E-01
LONGERON	173.1	1.51E-07	5.43E-01
ROW 4	158.1	1.77E-05	9.39E+01
LONGERON	143.1	1.19E-01	9.11E+05
ROW 5	128.1	5.49E+03	5.52E+10
LONGERON	113.1	1.56E+08	2.09E+15
ROW 6	98.1	2.73E+11	6.08E+18
LONGERON	83.1	8.49E+12	2.49E+20
ROW 7	68.1	2.51E+13	7.43E+20
LONGERON	53.1	4.04E+13	1.20E+21
ROW 8	38.1	5.29E+13	1.57E+21
LONGERON	23.1	6.19E+13	1.83E+21
ROW 9	8.2	6.66E+13	1.97E+21
LONGERON	6.9	6.68E+13	1.98E+21
ROW 10	21.9	6.24E+13	1.85E+21
LONGERON	36.9	5.38E+13	1.59E+21
ROW 11	51.9	4.15E+13	1.23E+21
LONGERON	66.9	2.64E+13	7.82E+20
ROW 12	81.9	9.78E+12	2.87E+20
LONGERON	96.9	4.27E+11	9.65E+18
SPACE END	89.2	3.22E+12	8.94E+19
EARTH END	-90.8	2.29E+12	6.18E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	6.73E+13	1.99E+21
SIDE DIR	90.0	2.73E+12	7.48E+19

AVERAGE ATOMIC OXYGEN DENSITY: 8.80E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 860.2 TO 1438.4 K
 ALTITUDE RANGE: 445.9 TO 456.4 KM

 *DATE: DECEMBER 10, 1988 DAY OF YEAR: 345 *
 *CUMULATIVE EXPOSURE TIME: 1708 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	5.53E+08	4.77E+15
LONGERON	126.9	4.22E+04	1.54E+11
ROW 2	141.9	1.26E+00	2.72E+06
LONGERON	156.9	1.60E-04	2.56E+02
ROW 3	171.9	7.67E-07	1.12E+00
LONGERON	173.1	5.31E-07	8.64E-01
ROW 4	158.1	5.76E-05	1.29E+02
LONGERON	143.1	3.05E-01	1.10E+06
ROW 5	128.1	1.01E+04	6.14E+10
LONGERON	113.1	2.13E+08	2.21E+15
ROW 6	98.1	3.13E+11	6.27E+18
LONGERON	83.1	9.30E+12	2.55E+20
ROW 7	68.1	2.74E+13	7.60E+20
LONGERON	53.1	4.41E+13	1.22E+21
ROW 8	38.1	5.77E+13	1.60E+21
LONGERON	23.1	6.75E+13	1.87E+21
ROW 9	8.1	7.26E+13	2.02E+21
LONGERON	6.9	7.28E+13	2.02E+21
ROW 10	21.9	6.81E+13	1.89E+21
LONGERON	36.9	5.87E+13	1.63E+21
ROW 11	51.9	4.53E+13	1.26E+21
LONGERON	66.9	2.88E+13	7.99E+20
ROW 12	81.9	1.06E+13	2.93E+20
LONGERON	96.9	4.78E+11	9.94E+18
SPACE END	89.2	3.54E+12	9.15E+19
EARTH END	-90.8	2.53E+12	6.33E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	7.34E+13	2.04E+21
SIDE DIR	90.0	3.01E+12	7.66E+19

AVERAGE ATOMIC OXYGEN DENSITY: 9.60E+07 ATOMS/CM**3
 TEMPERATURE RANGE: 884.4 TO 1494.5 K
 ALTITUDE RANGE: 446.0 TO 454.6 KM

 *DATE: DECEMBER 17, 1988 DAY OF YEAR: 352 *
 *CUMULATIVE EXPOSURE TIME: 1715 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	9.56E+08	5.35E+15
LONGERON	126.9	1.21E+05	2.27E+11
ROW 2	141.9	7.72E+00	7.39E+06
LONGERON	156.9	2.12E-03	1.54E+03
ROW 3	171.9	1.80E-05	1.20E+01
LONGERON	173.0	1.55E-05	1.02E+01
ROW 4	158.1	1.37E-03	9.56E+02
LONGERON	143.1	4.01E+00	3.52E+06
ROW 5	128.1	5.74E+04	9.61E+10
LONGERON	113.1	4.93E+08	2.51E+15
ROW 6	98.1	4.27E+11	6.53E+18
LONGERON	83.1	1.13E+13	2.62E+20
ROW 7	68.1	3.30E+13	7.80E+20
LONGERON	53.1	5.32E+13	1.26E+21
ROW 8	38.1	6.97E+13	1.65E+21
LONGERON	23.1	8.14E+13	1.92E+21
ROW 9	8.1	8.76E+13	2.07E+21
LONGERON	7.0	8.79E+13	2.08E+21
ROW 10	21.9	8.21E+13	1.94E+21
LONGERON	36.9	7.08E+13	1.67E+21
ROW 11	51.9	5.46E+13	1.29E+21
LONGERON	66.9	3.47E+13	8.20E+20
ROW 12	81.9	1.29E+13	3.01E+20
LONGERON	96.9	6.33E+11	1.03E+19
SPACE END	89.2	4.38E+12	9.42E+19
EARTH END	-90.8	3.16E+12	6.53E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	8.85E+13	2.09E+21
SIDE DIR	90.0	3.74E+12	7.89E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.16E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 928.0 TO 1644.8 K
 ALTITUDE RANGE: 444.9 TO 453.8 KM

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*DATE:  DECEMBER 24, 1988      DAY OF YEAR: 359 *
*CUMULATIVE EXPOSURE TIME: 1722 DAYS          *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.02E+09	5.96E+15
LONGERON	126.9	1.21E+05	3.00E+11
ROW 2	141.9	7.92E+00	1.22E+07
LONGERON	156.9	2.38E-03	2.97E+03
ROW 3	171.9	2.32E-05	2.60E+01
LONGERON	173.0	2.34E-05	2.44E+01
ROW 4	158.1	2.35E-03	2.38E+03
LONGERON	143.1	7.15E+00	7.84E+06
ROW 5	128.1	9.39E+04	1.53E+11
LONGERON	113.1	6.47E+08	2.90E+15
ROW 6	98.1	4.62E+11	6.81E+18
LONGERON	83.1	1.18E+13	2.69E+20
ROW 7	68.1	3.45E+13	8.01E+20
LONGERON	53.1	5.55E+13	1.29E+21
ROW 8	38.1	7.27E+13	1.69E+21
LONGERON	23.1	8.50E+13	1.97E+21
ROW 9	8.1	9.15E+13	2.13E+21
LONGERON	7.0	9.18E+13	2.13E+21
ROW 10	21.9	8.58E+13	1.99E+21
LONGERON	36.9	7.39E+13	1.72E+21
ROW 11	51.9	5.70E+13	1.32E+21
LONGERON	66.9	3.63E+13	8.42E+20
ROW 12	81.9	1.35E+13	3.09E+20
LONGERON	96.9	6.76E+11	1.07E+19
SPACE END	89.2	4.60E+12	9.70E+19
EARTH END	-90.8	3.33E+12	6.73E+19
	CONSTANT INCIDENCE ANGLE (DEGREES)		
RAM DIR	0.0	9.25E+13	2.15E+21
SIDE DIR	90.0	3.94E+12	8.12E+19

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AVERAGE ATOMIC OXYGEN DENSITY: 1.21E+08 ATOMS/CM**3
TEMPERATURE RANGE: 965.0 TO 1643.0 K
ALTITUDE RANGE: 444.4 TO 454.0 KM

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 *DATE: DECEMBER 31, 1988 DAY OF YEAR: 366 *
 *CUMULATIVE EXPOSURE TIME: 1729 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	6.78E+08	6.37E+15
LONGERON	126.9	5.05E+04	3.31E+11
ROW 2	141.9	2.15E+00	1.35E+07
LONGERON	156.9	5.17E-04	3.29E+03
ROW 3	171.9	5.04E-06	2.91E+01
LONGERON	173.0	5.88E-06	2.79E+01
ROW 4	158.1	7.45E-04	2.83E+03
LONGERON	143.1	3.02E+00	9.67E+06
ROW 5	128.1	5.37E+04	1.85E+11
LONGERON	113.1	4.76E+08	3.19E+15
ROW 6	98.1	3.97E+11	7.05E+18
LONGERON	83.1	1.07E+13	2.75E+20
ROW 7	68.1	3.13E+13	8.20E+20
LONGERON	53.1	5.05E+13	1.32E+21
ROW 8	38.1	6.61E+13	1.73E+21
LONGERON	23.1	7.73E+13	2.02E+21
ROW 9	8.1	8.32E+13	2.18E+21
LONGERON	7.0	8.34E+13	2.18E+21
ROW 10	21.9	7.79E+13	2.04E+21
LONGERON	36.9	6.72E+13	1.76E+21
ROW 11	51.9	5.18E+13	1.36E+21
LONGERON	66.9	3.29E+13	8.62E+20
ROW 12	81.9	1.22E+13	3.17E+20
LONGERON	96.9	5.79E+11	1.11E+19
SPACE END	89.2	4.13E+12	9.94E+19
EARTH END	-90.8	2.97E+12	6.91E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	8.40E+13	2.20E+21
SIDE DIR	90.0	3.52E+12	8.34E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.10E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 924.9 TO 1587.1 K
 ALTITUDE RANGE: 443.3 TO 453.8 KM

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*DATE:    JANUARY  7, 1989          DAY OF YEAR:    7 *
*CUMULATIVE EXPOSURE TIME: 1736 DAYS                      *
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AVERAGES AND RANGES ARE BASED ON 1751 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	9.85E+08	6.97E+15
LONGERON	126.9	1.08E+05	3.96E+11
ROW 2	141.9	7.19E+00	1.78E+07
LONGERON	156.9	2.43E-03	4.76E+03
ROW 3	171.8	2.57E-05	4.46E+01
LONGERON	173.1	2.45E-05	4.28E+01
ROW 4	158.1	2.13E-03	4.12E+03
LONGERON	143.1	5.83E+00	1.32E+07
ROW 5	128.1	7.73E+04	2.32E+11
LONGERON	113.1	6.04E+08	3.56E+15
ROW 6	98.1	4.74E+11	7.34E+18
LONGERON	83.1	1.22E+13	2.83E+20
ROW 7	68.1	3.58E+13	8.41E+20
LONGERON	53.1	5.76E+13	1.35E+21
ROW 8	38.1	7.55E+13	1.78E+21
LONGERON	23.1	8.83E+13	2.08E+21
ROW 9	8.2	9.50E+13	2.23E+21
LONGERON	6.9	9.53E+13	2.24E+21
ROW 10	21.9	8.91E+13	2.09E+21
LONGERON	36.9	7.68E+13	1.80E+21
ROW 11	51.9	5.92E+13	1.39E+21
LONGERON	66.9	3.77E+13	8.85E+20
ROW 12	81.9	1.40E+13	3.25E+20
LONGERON	96.9	6.94E+11	1.15E+19
SPACE END	89.2	4.77E+12	1.02E+20
EARTH END	-90.8	3.45E+12	7.12E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	9.60E+13	2.26E+21
SIDE DIR	90.0	4.08E+12	8.58E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.25E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 921.6 TO 1656.6 K
 ALTITUDE RANGE: 441.7 TO 452.3 KM

 *DATE: JANUARY 14, 1989 DAY OF YEAR: 14 *
 *CUMULATIVE EXPOSURE TIME: 1743 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.48E+09	8.47E+15
LONGERON	126.9	6.33E+05	7.79E+11
ROW 2	141.9	8.25E+01	6.78E+07
LONGERON	156.9	3.86E-02	2.81E+04
ROW 3	171.8	4.05E-04	2.89E+02
LONGERON	173.1	2.96E-04	2.22E+02
ROW 4	158.1	1.65E-02	1.41E+04
LONGERON	143.1	2.61E+01	2.90E+07
ROW 5	128.1	2.08E+05	3.58E+11
LONGERON	113.1	1.16E+09	4.26E+15
ROW 6	98.1	7.05E+11	7.76E+18
LONGERON	83.1	1.61E+13	2.92E+20
ROW 7	68.1	4.68E+13	8.70E+20
LONGERON	53.1	7.53E+13	1.40E+21
ROW 8	38.1	9.87E+13	1.84E+21
LONGERON	23.1	1.15E+14	2.14E+21
ROW 9	8.2	1.24E+14	2.31E+21
LONGERON	6.9	1.25E+14	2.32E+21
ROW 10	21.9	1.16E+14	2.16E+21
LONGERON	36.9	1.00E+14	1.86E+21
ROW 11	51.9	7.75E+13	1.44E+21
LONGERON	66.9	4.93E+13	9.15E+20
ROW 12	81.9	1.84E+13	3.36E+20
LONGERON	96.9	1.04E+12	1.21E+19
SPACE END	89.2	6.46E+12	1.06E+20
EARTH END	-90.8	4.72E+12	7.40E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.26E+14	2.33E+21
SIDE DIR	90.0	5.55E+12	8.92E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.64E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 986.2 TO 1724.2 K
 ALTITUDE RANGE: 440.3 TO 449.1 KM

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*DATE:    JANUARY 21, 1989          DAY OF YEAR:  21 *
*CUMULATIVE EXPOSURE TIME: 1750 DAYS                      *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.52E+09	9.99E+15
LONGERON	126.9	6.44E+05	1.17E+12
ROW 2	141.9	7.97E+01	1.16E+08
LONGERON	156.9	3.39E-02	4.86E+04
ROW 3	171.9	3.19E-04	4.82E+02
LONGERON	173.1	2.14E-04	3.51E+02
ROW 4	158.1	1.15E-02	2.11E+04
LONGERON	143.1	1.88E+01	4.04E+07
ROW 5	128.1	1.65E+05	4.57E+11
LONGERON	113.1	1.08E+09	4.91E+15
ROW 6	98.1	7.16E+11	8.20E+18
LONGERON	83.1	1.65E+13	3.02E+20
ROW 7	68.1	4.80E+13	8.99E+20
LONGERON	53.1	7.73E+13	1.45E+21
ROW 8	38.1	1.01E+14	1.90E+21
LONGERON	23.1	1.18E+14	2.22E+21
ROW 9	8.1	1.27E+14	2.39E+21
LONGERON	6.9	1.28E+14	2.39E+21
ROW 10	21.9	1.19E+14	2.24E+21
LONGERON	36.9	1.03E+14	1.93E+21
ROW 11	51.9	7.94E+13	1.49E+21
LONGERON	66.9	5.05E+13	9.45E+20
ROW 12	81.9	1.89E+13	3.48E+20
LONGERON	96.9	1.05E+12	1.28E+19
SPACE END	89.2	6.61E+12	1.10E+20
EARTH END	-90.8	4.82E+12	7.69E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.29E+14	2.41E+21
SIDE DIR	90.0	5.67E+12	9.26E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.68E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 990.8 TO 1718.9 K
 ALTITUDE RANGE: 438.5 TO 448.9 KM

 *DATE: JANUARY 28, 1989 DAY OF YEAR: 28 *
 *CUMULATIVE EXPOSURE TIME: 1757 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.39E+09	1.08E+16
LONGERON	126.9	1.97E+05	1.29E+12
ROW 2	141.9	1.34E+01	1.24E+08
LONGERON	156.9	3.72E-03	5.08E+04
ROW 3	171.9	3.03E-05	5.01E+02
LONGERON	173.0	2.34E-05	3.65E+02
ROW 4	158.1	1.81E-03	2.22E+04
LONGERON	143.1	4.84E+00	4.33E+07
ROW 5	128.1	6.91E+04	4.99E+11
LONGERON	113.1	6.47E+08	5.31E+15
ROW 6	98.1	5.64E+11	8.54E+18
LONGERON	83.1	1.44E+13	3.11E+20
ROW 7	68.1	4.21E+13	9.24E+20
LONGERON	53.1	6.77E+13	1.49E+21
ROW 8	38.1	8.87E+13	1.95E+21
LONGERON	23.1	1.04E+14	2.28E+21
ROW 9	8.1	1.12E+14	2.45E+21
LONGERON	7.0	1.12E+14	2.46E+21
ROW 10	21.9	1.05E+14	2.30E+21
LONGERON	36.9	9.02E+13	1.98E+21
ROW 11	51.9	6.96E+13	1.53E+21
LONGERON	66.9	4.42E+13	9.72E+20
ROW 12	81.9	1.64E+13	3.58E+20
LONGERON	96.9	8.31E+11	1.33E+19
SPACE END	89.2	5.64E+12	1.14E+20
EARTH END	-90.8	4.07E+12	7.94E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.13E+14	2.48E+21
SIDE DIR	90.0	4.82E+12	9.55E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.47E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 968.6 TO 1630.7 K
 ALTITUDE RANGE: 437.4 TO 448.9 KM

 *DATE: FEBRUARY 4, 1989 DAY OF YEAR: 35 *
 *CUMULATIVE EXPOSURE TIME: 1764 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	9.74E+08	1.14E+16
LONGERON	126.9	8.91E+04	1.34E+12
ROW 2	141.9	4.15E+00	1.27E+08
LONGERON	156.9	9.21E-04	5.14E+04
ROW 3	171.9	7.66E-06	5.05E+02
LONGERON	173.0	7.74E-06	3.70E+02
ROW 4	158.1	8.90E-04	2.27E+04
LONGERON	143.1	3.43E+00	4.54E+07
ROW 5	128.1	6.03E+04	5.36E+11
LONGERON	113.1	5.70E+08	5.65E+15
ROW 6	98.1	5.04E+11	8.84E+18
LONGERON	83.1	1.35E+13	3.19E+20
ROW 7	68.1	3.95E+13	9.48E+20
LONGERON	53.1	6.36E+13	1.53E+21
ROW 8	38.1	8.33E+13	2.00E+21
LONGERON	23.1	9.74E+13	2.34E+21
ROW 9	8.1	1.05E+14	2.52E+21
LONGERON	7.0	1.05E+14	2.52E+21
ROW 10	21.9	9.83E+13	2.36E+21
LONGERON	36.9	8.47E+13	2.03E+21
ROW 11	51.9	6.53E+13	1.57E+21
LONGERON	66.9	4.15E+13	9.97E+20
ROW 12	81.9	1.54E+13	3.67E+20
LONGERON	96.9	7.45E+11	1.37E+19
SPACE END	89.2	5.23E+12	1.17E+20
EARTH END	-90.8	3.76E+12	8.17E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	1.06E+14	2.54E+21
SIDE DIR	90.0	4.46E+12	9.82E+19

AVERAGE ATOMIC OXYGEN DENSITY: 1.39E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 956.8 TO 1562.8 K
 ALTITUDE RANGE: 436.6 TO 448.1 KM


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*DATE:  FEBRUARY 11, 1989          DAY OF YEAR:  42 *
*CUMULATIVE EXPOSURE TIME: 1771 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.34E+09	1.22E+16
LONGERON	126.9	1.29E+05	1.42E+12
ROW 2	141.9	7.49E+00	1.31E+08
LONGERON	156.9	2.57E-03	5.29E+04
ROW 3	171.9	3.29E-05	5.25E+02
LONGERON	173.0	4.11E-05	3.95E+02
ROW 4	158.1	4.42E-03	2.54E+04
LONGERON	143.1	1.27E+01	5.31E+07
ROW 5	128.1	1.49E+05	6.25E+11
LONGERON	113.1	9.41E+08	6.22E+15
ROW 6	98.1	6.38E+11	9.23E+18
LONGERON	83.1	1.57E+13	3.29E+20
ROW 7	68.1	4.59E+13	9.76E+20
LONGERON	53.1	7.39E+13	1.57E+21
ROW 8	38.1	9.68E+13	2.06E+21
LONGERON	23.1	1.13E+14	2.41E+21
ROW 9	8.1	1.22E+14	2.59E+21
LONGERON	7.0	1.22E+14	2.60E+21
ROW 10	21.9	1.14E+14	2.43E+21
LONGERON	36.9	9.84E+13	2.09E+21
ROW 11	51.9	7.59E+13	1.61E+21
LONGERON	66.9	4.82E+13	1.03E+21
ROW 12	81.9	1.79E+13	3.78E+20
LONGERON	96.9	9.19E+11	1.43E+19
SPACE END	89.2	6.18E+12	1.21E+20
EARTH END	-90.8	4.48E+12	8.44E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.23E+14	2.62E+21
SIDE DIR	90.0	5.29E+12	1.01E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.61E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 969.5 TO 1613.7 K
 ALTITUDE RANGE: 436.6 TO 445.3 KM

 *DATE: FEBRUARY 18, 1989 DAY OF YEAR: 49 *
 *CUMULATIVE EXPOSURE TIME: 1778 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.39E+09	1.31E+16
LONGERON	126.9	1.23E+05	1.49E+12
ROW 2	141.9	6.86E+00	1.35E+08
LONGERON	156.9	2.35E-03	5.44E+04
ROW 3	171.9	2.87E-05	5.43E+02
LONGERON	173.1	3.36E-05	4.15E+02
ROW 4	158.1	3.45E-03	2.74E+04
LONGERON	143.1	9.95E+00	5.91E+07
ROW 5	128.1	1.25E+05	7.01E+11
LONGERON	113.1	9.10E+08	6.77E+15
ROW 6	98.1	6.70E+11	9.63E+18
LONGERON	83.1	1.65E+13	3.39E+20
ROW 7	68.1	4.83E+13	1.01E+21
LONGERON	53.1	7.78E+13	1.62E+21
ROW 8	38.1	1.02E+14	2.12E+21
LONGERON	23.1	1.19E+14	2.48E+21
ROW 9	8.1	1.28E+14	2.67E+21
LONGERON	6.9	1.29E+14	2.68E+21
ROW 10	21.9	1.20E+14	2.50E+21
LONGERON	36.9	1.04E+14	2.15E+21
ROW 11	51.9	7.99E+13	1.66E+21
LONGERON	66.9	5.08E+13	1.06E+21
ROW 12	81.9	1.89E+13	3.89E+20
LONGERON	96.9	9.72E+11	1.49E+19
SPACE END	89.2	6.51E+12	1.24E+20
EARTH END	-90.8	4.73E+12	8.72E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	1.30E+14	2.70E+21
SIDE DIR	90.0	5.57E+12	1.05E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.69E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 1024.5 TO 1608.0 K
 ALTITUDE RANGE: 433.8 TO 443.2 KM

 *DATE: FEBRUARY 25, 1989 DAY OF YEAR: 56 *
 *CUMULATIVE EXPOSURE TIME: 1785 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.15E+09	1.38E+16
LONGERON	126.9	1.05E+05	1.56E+12
ROW 2	141.9	4.69E+00	1.38E+08
LONGERON	156.9	9.57E-04	5.49E+04
ROW 3	171.8	6.81E-06	5.47E+02
LONGERON	173.1	5.57E-06	4.19E+02
ROW 4	158.1	5.34E-04	2.78E+04
LONGERON	143.1	1.96E+00	6.03E+07
ROW 5	128.1	4.10E+04	7.26E+11
LONGERON	113.1	5.56E+08	7.11E+15
ROW 6	98.1	5.85E+11	9.99E+18
LONGERON	83.1	1.55E+13	3.48E+20
ROW 7	68.1	4.56E+13	1.03E+21
LONGERON	53.1	7.34E+13	1.66E+21
ROW 8	38.1	9.63E+13	2.18E+21
LONGERON	23.1	1.13E+14	2.55E+21
ROW 9	8.2	1.21E+14	2.74E+21
LONGERON	6.9	1.21E+14	2.75E+21
ROW 10	21.9	1.14E+14	2.57E+21
LONGERON	36.9	9.79E+13	2.21E+21
ROW 11	51.9	7.55E+13	1.71E+21
LONGERON	66.9	4.80E+13	1.09E+21
ROW 12	81.9	1.78E+13	4.00E+20
LONGERON	96.9	8.74E+11	1.54E+19
SPACE END	89.2	6.07E+12	1.28E+20
EARTH END	-90.8	4.37E+12	8.99E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.22E+14	2.77E+21
SIDE DIR	90.0	5.17E+12	1.08E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.60E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 972.7 TO 1530.1 K
 ALTITUDE RANGE: 432.6 TO 443.6 KM

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*DATE:      MARCH   4, 1989      DAY OF YEAR:   63 *
*CUMULATIVE EXPOSURE TIME: 1792 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.19E+09	1.45E+16
LONGERON	126.9	1.21E+05	1.63E+12
ROW 2	141.9	4.90E+00	1.41E+08
LONGERON	156.9	7.10E-04	5.54E+04
ROW 3	171.8	3.18E-06	5.49E+02
LONGERON	173.1	1.76E-06	4.20E+02
ROW 4	158.1	1.45E-04	2.79E+04
LONGERON	143.1	6.28E-01	6.07E+07
ROW 5	128.1	1.99E+04	7.38E+11
LONGERON	113.1	4.33E+08	7.37E+15
ROW 6	98.1	5.61E+11	1.03E+19
LONGERON	83.1	1.53E+13	3.57E+20
ROW 7	68.1	4.51E+13	1.06E+21
LONGERON	53.1	7.25E+13	1.71E+21
ROW 8	38.1	9.51E+13	2.24E+21
LONGERON	23.1	1.11E+14	2.61E+21
ROW 9	8.2	1.20E+14	2.81E+21
LONGERON	6.9	1.20E+14	2.82E+21
ROW 10	21.9	1.12E+14	2.64E+21
LONGERON	36.9	9.67E+13	2.27E+21
ROW 11	51.9	7.46E+13	1.75E+21
LONGERON	66.9	4.75E+13	1.11E+21
ROW 12	81.9	1.76E+13	4.11E+20
LONGERON	96.9	8.56E+11	1.59E+19
SPACE END	89.2	5.97E+12	1.32E+20
EARTH END	-90.8	4.29E+12	9.25E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.21E+14	2.84E+21
SIDE DIR	90.0	5.08E+12	1.11E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.58E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 961.5 TO 1456.6 K
 ALTITUDE RANGE: 431.2 TO 443.5 KM

 *DATE: MARCH 11, 1989 DAY OF YEAR: 70 *
 *CUMULATIVE EXPOSURE TIME: 1799 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.19E+09	1.58E+16
LONGERON	126.9	3.06E+05	1.81E+12
ROW 2	141.9	1.93E+01	1.53E+08
LONGERON	156.9	5.00E-03	5.84E+04
ROW 3	171.9	3.94E-05	5.72E+02
LONGERON	173.1	3.05E-05	4.38E+02
ROW 4	158.1	2.38E-03	2.93E+04
LONGERON	143.1	6.35E+00	6.45E+07
ROW 5	128.1	9.41E+04	7.95E+11
LONGERON	113.1	9.60E+08	7.95E+15
ROW 6	98.1	7.94E+11	1.08E+19
LONGERON	83.1	1.91E+13	3.69E+20
ROW 7	68.1	5.58E+13	1.09E+21
LONGERON	53.1	8.99E+13	1.76E+21
ROW 8	38.1	1.18E+14	2.31E+21
LONGERON	23.1	1.38E+14	2.70E+21
ROW 9	8.1	1.48E+14	2.90E+21
LONGERON	6.9	1.49E+14	2.91E+21
ROW 10	21.9	1.39E+14	2.72E+21
LONGERON	36.9	1.20E+14	2.34E+21
ROW 11	51.9	9.24E+13	1.81E+21
LONGERON	66.9	5.88E+13	1.15E+21
ROW 12	81.9	2.19E+13	4.24E+20
LONGERON	96.9	1.18E+12	1.66E+19
SPACE END	89.2	7.61E+12	1.36E+20
EARTH END	-90.8	5.53E+12	9.58E+19

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.50E+14	2.93E+21
SIDE DIR	90.0	6.52E+12	1.15E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.96E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 1004.3 TO 1645.6 K
 ALTITUDE RANGE: 430.5 TO 441.7 KM

 *DATE: MARCH 18, 1989 DAY OF YEAR: 77 *
 *CUMULATIVE EXPOSURE TIME: 1806 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.18E+09	1.71E+16
LONGERON	126.9	2.53E+05	1.97E+12
ROW 2	141.9	1.50E+01	1.62E+08
LONGERON	156.9	4.49E-03	6.11E+04
ROW 3	171.9	4.58E-05	6.00E+02
LONGERON	173.0	4.63E-05	4.66E+02
ROW 4	158.1	4.37E-03	3.19E+04
LONGERON	143.1	1.23E+01	7.19E+07
ROW 5	128.1	1.59E+05	8.91E+11
LONGERON	113.1	1.23E+09	8.69E+15
ROW 6	98.1	8.67E+11	1.13E+19
LONGERON	83.1	2.04E+13	3.81E+20
ROW 7	68.1	5.93E+13	1.13E+21
LONGERON	53.1	9.54E+13	1.82E+21
ROW 8	38.1	1.25E+14	2.38E+21
LONGERON	23.1	1.46E+14	2.79E+21
ROW 9	8.1	1.57E+14	3.00E+21
LONGERON	7.0	1.58E+14	3.01E+21
ROW 10	21.9	1.47E+14	2.81E+21
LONGERON	36.9	1.27E+14	2.42E+21
ROW 11	51.9	9.79E+13	1.87E+21
LONGERON	66.9	6.23E+13	1.19E+21
ROW 12	81.9	2.32E+13	4.38E+20
LONGERON	96.9	1.25E+12	1.74E+19
SPACE END	89.2	8.10E+12	1.41E+20
EARTH END	-90.8	5.90E+12	9.94E+19

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	1.59E+14	3.03E+21
SIDE DIR	90.0	6.95E+12	1.19E+20

AVERAGE ATOMIC OXYGEN DENSITY: 2.07E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 1064.8 TO 1640.5 K
 ALTITUDE RANGE: 429.4 TO 438.4 KM

 *DATE: MARCH 25, 1989 DAY OF YEAR: 84 *
 *CUMULATIVE EXPOSURE TIME: 1813 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.16E+09	1.78E+16
LONGERON	126.9	6.48E+04	2.01E+12
ROW 2	141.9	2.05E+00	1.63E+08
LONGERON	156.9	4.80E-04	6.14E+04
ROW 3	171.9	5.25E-06	6.03E+02
LONGERON	173.0	6.96E-06	4.70E+02
ROW 4	158.1	9.76E-04	3.25E+04
LONGERON	143.1	4.25E+00	7.45E+07
ROW 5	128.1	8.03E+04	9.40E+11
LONGERON	113.1	7.94E+08	9.17E+15
ROW 6	98.1	6.81E+11	1.17E+19
LONGERON	83.1	1.75E+13	3.92E+20
ROW 7	68.1	5.13E+13	1.16E+21
LONGERON	53.1	8.26E+13	1.87E+21
ROW 8	38.1	1.08E+14	2.45E+21
LONGERON	23.1	1.26E+14	2.86E+21
ROW 9	8.1	1.36E+14	3.08E+21
LONGERON	7.0	1.37E+14	3.09E+21
ROW 10	21.9	1.28E+14	2.89E+21
LONGERON	36.9	1.10E+14	2.49E+21
ROW 11	51.9	8.48E+13	1.92E+21
LONGERON	66.9	5.39E+13	1.22E+21
ROW 12	81.9	2.00E+13	4.50E+20
LONGERON	96.9	9.86E+11	1.80E+19
SPACE END	89.2	6.84E+12	1.45E+20
EARTH END	-90.8	4.94E+12	1.02E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.38E+14	3.11E+21
SIDE DIR	90.0	5.84E+12	1.23E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.80E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 1006.5 TO 1492.8 K
 ALTITUDE RANGE: 427.0 TO 436.4 KM

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*DATE:      APRIL   1, 1989          DAY OF YEAR:   91 *
*CUMULATIVE EXPOSURE TIME: 1820 DAYS                                *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	8.84E+08	1.84E+16
LONGERON	126.9	3.88E+04	2.03E+12
ROW 2	141.9	9.04E-01	1.64E+08
LONGERON	156.9	1.49E-04	6.15E+04
ROW 3	171.9	1.22E-06	6.04E+02
LONGERON	173.1	1.47E-06	4.71E+02
ROW 4	158.1	2.36E-04	3.27E+04
LONGERON	143.1	1.42E+00	7.54E+07
ROW 5	128.1	4.07E+04	9.64E+11
LONGERON	113.1	5.75E+08	9.52E+15
ROW 6	98.1	6.00E+11	1.21E+19
LONGERON	83.1	1.63E+13	4.02E+20
ROW 7	68.1	4.78E+13	1.19E+21
LONGERON	53.1	7.70E+13	1.91E+21
ROW 8	38.1	1.01E+14	2.51E+21
LONGERON	23.1	1.18E+14	2.93E+21
ROW 9	8.1	1.27E+14	3.16E+21
LONGERON	6.9	1.27E+14	3.17E+21
ROW 10	21.9	1.19E+14	2.96E+21
LONGERON	36.9	1.03E+14	2.55E+21
ROW 11	51.9	7.91E+13	1.97E+21
LONGERON	66.9	5.03E+13	1.25E+21
ROW 12	81.9	1.87E+13	4.61E+20
LONGERON	96.9	8.81E+11	1.85E+19
SPACE END	89.2	6.30E+12	1.49E+20
EARTH END	-90.8	4.53E+12	1.05E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.28E+14	3.19E+21
SIDE DIR	90.0	5.37E+12	1.26E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.67E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 993.5 TO 1436.9 K
 ALTITUDE RANGE: 426.1 TO 436.3 KM

 *DATE: APRIL 8, 1989 DAY OF YEAR: 98 *
 *CUMULATIVE EXPOSURE TIME: 1827 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.15E+09	1.91E+16
LONGERON	126.9	8.51E+04	2.08E+12
ROW 2	141.9	3.14E+00	1.65E+08
LONGERON	156.9	5.35E-04	6.18E+04
ROW 3	171.8	3.25E-06	6.06E+02
LONGERON	173.1	2.52E-06	4.73E+02
ROW 4	158.1	2.71E-04	3.28E+04
LONGERON	143.1	1.29E+00	7.62E+07
ROW 5	128.1	3.56E+04	9.86E+11
LONGERON	113.1	5.73E+08	9.87E+15
ROW 6	98.1	6.34E+11	1.25E+19
LONGERON	83.1	1.70E+13	4.12E+20
ROW 7	68.1	5.00E+13	1.22E+21
LONGERON	53.1	8.04E+13	1.96E+21
ROW 8	38.1	1.05E+14	2.57E+21
LONGERON	23.1	1.23E+14	3.01E+21
ROW 9	8.2	1.33E+14	3.24E+21
LONGERON	6.9	1.33E+14	3.25E+21
ROW 10	21.9	1.24E+14	3.03E+21
LONGERON	36.9	1.07E+14	2.62E+21
ROW 11	51.9	8.27E+13	2.02E+21
LONGERON	66.9	5.26E+13	1.28E+21
ROW 12	81.9	1.95E+13	4.73E+20
LONGERON	96.9	9.48E+11	1.91E+19
SPACE END	89.2	6.62E+12	1.53E+20
EARTH END	-90.8	4.77E+12	1.08E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.34E+14	3.27E+21
SIDE DIR	90.0	5.65E+12	1.29E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.75E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 998.2 TO 1454.0 K
 ALTITUDE RANGE: 424.6 TO 435.4 KM

 *DATE: APRIL 15, 1989 DAY OF YEAR: 105 *
 *CUMULATIVE EXPOSURE TIME: 1834 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.55E+09	2.00E+16
LONGERON	126.9	1.75E+05	2.19E+12
ROW 2	141.9	8.23E+00	1.70E+08
LONGERON	156.9	1.40E-03	6.27E+04
ROW 3	171.8	6.97E-06	6.10E+02
LONGERON	173.1	3.95E-06	4.75E+02
ROW 4	158.1	3.07E-04	3.30E+04
LONGERON	143.1	1.17E+00	7.69E+07
ROW 5	128.1	3.21E+04	1.01E+12
LONGERON	113.1	5.98E+08	1.02E+16
ROW 6	98.1	6.83E+11	1.29E+19
LONGERON	83.1	1.80E+13	4.23E+20
ROW 7	68.1	5.27E+13	1.25E+21
LONGERON	53.1	8.49E+13	2.01E+21
ROW 8	38.1	1.11E+14	2.64E+21
LONGERON	23.1	1.30E+14	3.09E+21
ROW 9	8.2	1.40E+14	3.32E+21
LONGERON	6.9	1.40E+14	3.33E+21
ROW 10	21.9	1.31E+14	3.11E+21
LONGERON	36.9	1.13E+14	2.68E+21
ROW 11	51.9	8.73E+13	2.07E+21
LONGERON	66.9	5.56E+13	1.32E+21
ROW 12	81.9	2.07E+13	4.86E+20
LONGERON	96.9	1.03E+12	1.97E+19
SPACE END	89.2	7.04E+12	1.57E+20
EARTH END	-90.8	5.08E+12	1.11E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.42E+14	3.36E+21
SIDE DIR	90.0	6.01E+12	1.33E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.85E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 1004.2 TO 1466.3 K
 ALTITUDE RANGE: 423.7 TO 432.9 KM

 *DATE: APRIL 22, 1989 DAY OF YEAR: 112 *
 *CUMULATIVE EXPOSURE TIME: 1841 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.48E+09	2.09E+16
LONGERON	126.9	1.49E+05	2.28E+12
ROW 2	141.9	6.13E+00	1.74E+08
LONGERON	156.9	9.98E-04	6.33E+04
ROW 3	171.9	5.45E-06	6.14E+02
LONGERON	173.1	3.67E-06	4.77E+02
ROW 4	158.1	3.30E-04	3.32E+04
LONGERON	143.1	1.29E+00	7.77E+07
ROW 5	128.1	3.28E+04	1.03E+12
LONGERON	113.1	5.78E+08	1.06E+16
ROW 6	98.1	6.74E+11	1.33E+19
LONGERON	83.1	1.80E+13	4.34E+20
ROW 7	68.1	5.27E+13	1.28E+21
LONGERON	53.1	8.49E+13	2.07E+21
ROW 8	38.1	1.11E+14	2.71E+21
LONGERON	23.1	1.30E+14	3.17E+21
ROW 9	8.1	1.40E+14	3.41E+21
LONGERON	6.9	1.40E+14	3.42E+21
ROW 10	21.9	1.31E+14	3.19E+21
LONGERON	36.9	1.13E+14	2.75E+21
ROW 11	51.9	8.73E+13	2.12E+21
LONGERON	66.9	5.55E+13	1.35E+21
ROW 12	81.9	2.06E+13	4.98E+20
LONGERON	96.9	1.02E+12	2.03E+19
SPACE END	89.2	7.02E+12	1.62E+20
EARTH END	-90.8	5.06E+12	1.14E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.41E+14	3.44E+21
SIDE DIR	90.0	5.99E+12	1.37E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.85E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 988.1 TO 1464.1 K
 ALTITUDE RANGE: 421.3 TO 431.0 KM

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*DATE:      APRIL 29, 1989      DAY OF YEAR: 119 *
*CUMULATIVE EXPOSURE TIME: 1848 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1751 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.18E+09	2.16E+16
LONGERON	126.9	7.96E+04	2.33E+12
ROW 2	141.9	2.50E+00	1.76E+08
LONGERON	156.9	4.23E-04	6.35E+04
ROW 3	171.9	3.13E-06	6.15E+02
LONGERON	173.0	3.17E-06	4.79E+02
ROW 4	158.1	4.09E-04	3.35E+04
LONGERON	143.1	1.94E+00	7.88E+07
ROW 5	128.1	4.54E+04	1.05E+12
LONGERON	113.1	6.14E+08	1.10E+16
ROW 6	98.1	6.53E+11	1.37E+19
LONGERON	83.1	1.75E+13	4.44E+20
ROW 7	68.1	5.14E+13	1.31E+21
LONGERON	53.1	8.28E+13	2.12E+21
ROW 8	38.1	1.08E+14	2.77E+21
LONGERON	23.1	1.27E+14	3.24E+21
ROW 9	8.1	1.36E+14	3.49E+21
LONGERON	7.0	1.37E+14	3.50E+21
ROW 10	21.9	1.28E+14	3.27E+21
LONGERON	36.9	1.10E+14	2.82E+21
ROW 11	51.9	8.50E+13	2.17E+21
LONGERON	66.9	5.41E+13	1.38E+21
ROW 12	81.9	2.01E+13	5.10E+20
LONGERON	96.9	9.70E+11	2.09E+19
SPACE END	89.2	6.81E+12	1.66E+20
EARTH END	-90.8	4.90E+12	1.17E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.38E+14	3.53E+21
SIDE DIR	90.0	5.80E+12	1.40E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.80E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 988.2 TO 1538.2 K
 ALTITUDE RANGE: 420.0 TO 430.7 KM

 *DATE: MAY 6, 1989 DAY OF YEAR: 126 *
 *CUMULATIVE EXPOSURE TIME: 1855 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.07E+09	2.22E+16
LONGERON	126.9	6.24E+04	2.36E+12
ROW 2	141.9	2.01E+00	1.77E+08
LONGERON	156.9	4.10E-04	6.38E+04
ROW 3	171.9	3.86E-06	6.18E+02
LONGERON	173.0	4.85E-06	4.82E+02
ROW 4	158.1	7.13E-04	3.39E+04
LONGERON	143.1	3.46E+00	8.09E+07
ROW 5	128.1	7.21E+04	1.10E+12
LONGERON	113.1	7.43E+08	1.14E+16
ROW 6	98.1	6.65E+11	1.41E+19
LONGERON	83.1	1.75E+13	4.55E+20
ROW 7	68.1	5.13E+13	1.35E+21
LONGERON	53.1	8.25E+13	2.17E+21
ROW 8	38.1	1.08E+14	2.84E+21
LONGERON	23.1	1.26E+14	3.32E+21
ROW 9	8.1	1.36E+14	3.57E+21
LONGERON	7.0	1.36E+14	3.58E+21
ROW 10	21.9	1.27E+14	3.35E+21
LONGERON	36.9	1.10E+14	2.88E+21
ROW 11	51.9	8.47E+13	2.23E+21
LONGERON	66.9	5.38E+13	1.42E+21
ROW 12	81.9	1.99E+13	5.22E+20
LONGERON	96.9	9.56E+11	2.15E+19
SPACE END	89.2	6.78E+12	1.70E+20
EARTH END	-90.8	4.89E+12	1.20E+20

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	1.37E+14	3.61E+21
SIDE DIR	90.0	5.79E+12	1.44E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.79E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 988.2 TO 1545.3 K
 ALTITUDE RANGE: 418.2 TO 430.2 KM

 *DATE: MAY 13, 1989 DAY OF YEAR: 133 *
 *CUMULATIVE EXPOSURE TIME: 1862 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	9.88E+08	2.28E+16
LONGERON	126.9	5.75E+04	2.40E+12
ROW 2	141.9	1.85E+00	1.78E+08
LONGERON	156.9	3.77E-04	6.40E+04
ROW 3	171.9	3.51E-06	6.20E+02
LONGERON	173.0	4.29E-06	4.85E+02
ROW 4	158.1	6.18E-04	3.43E+04
LONGERON	143.1	3.03E+00	8.27E+07
ROW 5	128.1	6.56E+04	1.14E+12
LONGERON	113.1	6.87E+08	1.18E+16
ROW 6	98.1	6.27E+11	1.45E+19
LONGERON	83.1	1.69E+13	4.65E+20
ROW 7	68.1	4.95E+13	1.38E+21
LONGERON	53.1	7.97E+13	2.21E+21
ROW 8	38.1	1.04E+14	2.90E+21
LONGERON	23.1	1.22E+14	3.39E+21
ROW 9	8.1	1.31E+14	3.65E+21
LONGERON	7.0	1.32E+14	3.66E+21
ROW 10	21.9	1.23E+14	3.42E+21
LONGERON	36.9	1.06E+14	2.95E+21
ROW 11	51.9	8.18E+13	2.28E+21
LONGERON	66.9	5.20E+13	1.45E+21
ROW 12	81.9	1.93E+13	5.34E+20
LONGERON	96.9	9.13E+11	2.20E+19
SPACE END	89.2	6.52E+12	1.74E+20
EARTH END	-90.8	4.69E+12	1.23E+20

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	1.33E+14	3.69E+21
SIDE DIR	90.0	5.56E+12	1.47E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.73E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 971.3 TO 1520.4 K
 ALTITUDE RANGE: 418.0 TO 427.5 KM

 *DATE: MAY 20, 1989 DAY OF YEAR: 140 *
 *CUMULATIVE EXPOSURE TIME: 1869 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.16E+09	2.35E+16
LONGERON	126.9	9.71E+04	2.46E+12
ROW 2	141.9	4.19E+00	1.81E+08
LONGERON	156.9	8.56E-04	6.45E+04
ROW 3	171.9	6.17E-06	6.24E+02
LONGERON	173.1	5.30E-06	4.88E+02
ROW 4	158.1	5.68E-04	3.46E+04
LONGERON	143.1	2.41E+00	8.42E+07
ROW 5	128.1	5.32E+04	1.17E+12
LONGERON	113.1	6.34E+08	1.22E+16
ROW 6	98.1	6.27E+11	1.49E+19
LONGERON	83.1	1.70E+13	4.75E+20
ROW 7	68.1	4.98E+13	1.41E+21
LONGERON	53.1	8.03E+13	2.26E+21
ROW 8	38.1	1.05E+14	2.97E+21
LONGERON	23.1	1.23E+14	3.47E+21
ROW 9	8.1	1.32E+14	3.73E+21
LONGERON	6.9	1.33E+14	3.74E+21
ROW 10	21.9	1.24E+14	3.50E+21
LONGERON	36.9	1.07E+14	3.01E+21
ROW 11	51.9	8.25E+13	2.33E+21
LONGERON	66.9	5.25E+13	1.48E+21
ROW 12	81.9	1.95E+13	5.46E+20
LONGERON	96.9	9.37E+11	2.26E+19
SPACE END	89.2	6.59E+12	1.78E+20
EARTH END	-90.8	4.74E+12	1.26E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.34E+14	3.77E+21
SIDE DIR	90.0	5.61E+12	1.50E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.75E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 969.5 TO 1521.0 K
 ALTITUDE RANGE: 415.8 TO 424.6 KM

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*DATE:      MAY 27, 1989      DAY OF YEAR: 147 *
*CUMULATIVE EXPOSURE TIME: 1876 DAYS          *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.53E+09	2.45E+16
LONGERON	126.9	1.83E+05	2.57E+12
ROW 2	141.9	9.43E+00	1.86E+08
LONGERON	156.9	1.80E-03	6.56E+04
ROW 3	171.8	1.01E-05	6.30E+02
LONGERON	173.1	6.18E-06	4.92E+02
ROW 4	158.1	4.97E-04	3.49E+04
LONGERON	143.1	1.84E+00	8.53E+07
ROW 5	128.1	4.31E+04	1.19E+12
LONGERON	113.1	6.31E+08	1.26E+16
ROW 6	98.1	6.63E+11	1.53E+19
LONGERON	83.1	1.75E+13	4.86E+20
ROW 7	68.1	5.15E+13	1.44E+21
LONGERON	53.1	8.29E+13	2.31E+21
ROW 8	38.1	1.09E+14	3.03E+21
LONGERON	23.1	1.27E+14	3.54E+21
ROW 9	8.2	1.37E+14	3.81E+21
LONGERON	6.9	1.37E+14	3.82E+21
ROW 10	21.9	1.28E+14	3.57E+21
LONGERON	36.9	1.10E+14	3.08E+21
ROW 11	51.9	8.53E+13	2.38E+21
LONGERON	66.9	5.42E+13	1.51E+21
ROW 12	81.9	2.02E+13	5.58E+20
LONGERON	96.9	1.01E+12	2.32E+19
SPACE END	89.2	6.86E+12	1.82E+20
EARTH END	-90.8	4.95E+12	1.29E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.38E+14	3.85E+21
SIDE DIR	90.0	5.86E+12	1.54E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.80E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 951.4 TO 1544.2 K
 ALTITUDE RANGE: 414.0 TO 425.1 KM

 *DATE: JUNE 3, 1989 DAY OF YEAR: 154 *
 *CUMULATIVE EXPOSURE TIME: 1883 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.72E+09	2.55E+16
LONGERON	126.9	2.18E+05	2.70E+12
ROW 2	141.9	1.11E+01	1.93E+08
LONGERON	156.9	2.11E-03	6.69E+04
ROW 3	171.8	1.25E-05	6.37E+02
LONGERON	173.1	8.26E-06	4.97E+02
ROW 4	158.1	6.60E-04	3.53E+04
LONGERON	143.1	2.19E+00	8.66E+07
ROW 5	128.1	4.62E+04	1.22E+12
LONGERON	113.1	6.62E+08	1.30E+16
ROW 6	98.1	6.81E+11	1.57E+19
LONGERON	83.1	1.78E+13	4.97E+20
ROW 7	68.1	5.20E+13	1.47E+21
LONGERON	53.1	8.38E+13	2.36E+21
ROW 8	38.1	1.10E+14	3.10E+21
LONGERON	23.1	1.28E+14	3.62E+21
ROW 9	8.2	1.38E+14	3.90E+21
LONGERON	6.9	1.39E+14	3.91E+21
ROW 10	21.9	1.30E+14	3.65E+21
LONGERON	36.9	1.12E+14	3.15E+21
ROW 11	51.9	8.62E+13	2.43E+21
LONGERON	66.9	5.48E+13	1.54E+21
ROW 12	81.9	2.04E+13	5.70E+20
LONGERON	96.9	1.03E+12	2.38E+19
SPACE END	89.2	6.97E+12	1.86E+20
EARTH END	-90.8	5.03E+12	1.32E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.40E+14	3.94E+21
SIDE DIR	90.0	5.95E+12	1.58E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.82E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 953.8 TO 1554.1 K
 ALTITUDE RANGE: 413.0 TO 425.1 KM

 *DATE: JUNE 10, 1989 DAY OF YEAR: 161 *
 *CUMULATIVE EXPOSURE TIME: 1890 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.27E+09	2.69E+16
LONGERON	126.9	3.33E+05	2.90E+12
ROW 2	141.9	2.31E+01	2.07E+08
LONGERON	156.9	7.10E-03	7.12E+04
ROW 3	171.9	6.94E-05	6.79E+02
LONGERON	173.1	6.36E-05	5.35E+02
ROW 4	158.1	5.20E-03	3.85E+04
LONGERON	143.1	1.25E+01	9.42E+07
ROW 5	128.1	1.44E+05	1.31E+12
LONGERON	113.1	1.09E+09	1.36E+16
ROW 6	98.1	8.15E+11	1.62E+19
LONGERON	83.1	1.97E+13	5.09E+20
ROW 7	68.1	5.73E+13	1.50E+21
LONGERON	53.1	9.23E+13	2.42E+21
ROW 8	38.1	1.21E+14	3.17E+21
LONGERON	23.1	1.41E+14	3.71E+21
ROW 9	8.1	1.52E+14	3.99E+21
LONGERON	6.9	1.53E+14	4.00E+21
ROW 10	21.9	1.43E+14	3.74E+21
LONGERON	36.9	1.23E+14	3.22E+21
ROW 11	51.9	9.48E+13	2.49E+21
LONGERON	66.9	6.03E+13	1.58E+21
ROW 12	81.9	2.25E+13	5.84E+20
LONGERON	96.9	1.20E+12	2.46E+19
SPACE END	89.2	7.80E+12	1.91E+20
EARTH END	-90.8	5.67E+12	1.35E+20

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	1.54E+14	4.03E+21
SIDE DIR	90.0	6.68E+12	1.62E+20

AVERAGE ATOMIC OXYGEN DENSITY: 2.01E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 987.6 TO 1698.3 K
 ALTITUDE RANGE: 411.6 TO 424.0 KM

 *DATE: JUNE 17, 1989 DAY OF YEAR: 168 *
 *CUMULATIVE EXPOSURE TIME: 1897 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.29E+09	2.83E+16
LONGERON	126.9	3.16E+05	3.09E+12
ROW 2	141.9	2.53E+01	2.22E+08
LONGERON	156.9	1.02E-02	7.73E+04
ROW 3	171.9	1.31E-04	7.58E+02
LONGERON	173.0	1.47E-04	6.24E+02
ROW 4	158.1	1.32E-02	4.65E+04
LONGERON	143.1	3.06E+01	1.13E+08
ROW 5	128.1	2.85E+05	1.48E+12
LONGERON	113.1	1.51E+09	1.46E+16
ROW 6	98.1	8.92E+11	1.67E+19
LONGERON	83.1	2.06E+13	5.21E+20
ROW 7	68.1	5.99E+13	1.54E+21
LONGERON	53.1	9.63E+13	2.48E+21
ROW 8	38.1	1.26E+14	3.25E+21
LONGERON	23.1	1.47E+14	3.80E+21
ROW 9	8.1	1.59E+14	4.09E+21
LONGERON	7.0	1.59E+14	4.10E+21
ROW 10	21.9	1.49E+14	3.83E+21
LONGERON	36.9	1.28E+14	3.30E+21
ROW 11	51.9	9.88E+13	2.55E+21
LONGERON	66.9	6.28E+13	1.62E+21
ROW 12	81.9	2.34E+13	5.98E+20
LONGERON	96.9	1.27E+12	2.53E+19
SPACE END	89.2	8.19E+12	1.96E+20
EARTH END	-90.8	5.97E+12	1.39E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.60E+14	4.13E+21
SIDE DIR	90.0	7.02E+12	1.66E+20

AVERAGE ATOMIC OXYGEN DENSITY: 2.09E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 1050.4 TO 1726.9 K
 ALTITUDE RANGE: 411.5 TO 420.4 KM

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*DATE:      JUNE 24, 1989      DAY OF YEAR: 175 *
*CUMULATIVE EXPOSURE TIME: 1904 DAYS          *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.45E+09	2.91E+16
LONGERON	126.9	1.39E+05	3.18E+12
ROW 2	141.9	7.92E+00	2.27E+08
LONGERON	156.9	2.59E-03	7.89E+04
ROW 3	171.9	3.15E-05	7.77E+02
LONGERON	173.0	3.85E-05	6.47E+02
ROW 4	158.1	4.22E-03	4.90E+04
LONGERON	143.1	1.29E+01	1.20E+08
ROW 5	128.1	1.62E+05	1.58E+12
LONGERON	113.1	1.06E+09	1.52E+16
ROW 6	98.1	7.25E+11	1.71E+19
LONGERON	83.1	1.80E+13	5.32E+20
ROW 7	68.1	5.27E+13	1.57E+21
LONGERON	53.1	8.47E+13	2.53E+21
ROW 8	38.1	1.11E+14	3.31E+21
LONGERON	23.1	1.30E+14	3.87E+21
ROW 9	8.1	1.40E+14	4.17E+21
LONGERON	7.0	1.40E+14	4.18E+21
ROW 10	21.9	1.31E+14	3.91E+21
LONGERON	36.9	1.13E+14	3.37E+21
ROW 11	51.9	8.70E+13	2.60E+21
LONGERON	66.9	5.53E+13	1.65E+21
ROW 12	81.9	2.05E+13	6.11E+20
LONGERON	96.9	1.03E+12	2.60E+19
SPACE END	89.2	7.06E+12	2.00E+20
EARTH END	-90.8	5.12E+12	1.42E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.41E+14	4.21E+21
SIDE DIR	90.0	6.04E+12	1.69E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.84E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 974.9 TO 1671.7 K
 ALTITUDE RANGE: 408.4 TO 417.5 KM

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*DATE:      JULY  1, 1989      DAY OF YEAR:  182 *
*CUMULATIVE EXPOSURE TIME: 1911 DAYS
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.03E+09	2.98E+16
LONGERON	126.9	7.78E+04	3.22E+12
ROW 2	141.9	3.06E+00	2.29E+08
LONGERON	156.9	6.32E-04	7.93E+04
ROW 3	171.9	5.19E-06	7.81E+02
LONGERON	173.1	5.30E-06	6.50E+02
ROW 4	158.1	6.48E-04	4.94E+04
LONGERON	143.1	2.86E+00	1.22E+08
ROW 5	128.1	6.00E+04	1.62E+12
LONGERON	113.1	6.33E+08	1.56E+16
ROW 6	98.1	5.87E+11	1.75E+19
LONGERON	83.1	1.60E+13	5.42E+20
ROW 7	68.1	4.70E+13	1.60E+21
LONGERON	53.1	7.56E+13	2.57E+21
ROW 8	38.1	9.91E+13	3.37E+21
LONGERON	23.1	1.16E+14	3.94E+21
ROW 9	8.1	1.25E+14	4.25E+21
LONGERON	6.9	1.25E+14	4.26E+21
ROW 10	21.9	1.17E+14	3.98E+21
LONGERON	36.9	1.01E+14	3.43E+21
ROW 11	51.9	7.77E+13	2.65E+21
LONGERON	66.9	4.94E+13	1.68E+21
ROW 12	81.9	1.84E+13	6.22E+20
LONGERON	96.9	8.70E+11	2.65E+19
SPACE END	89.2	6.18E+12	2.04E+20
EARTH END	-90.8	4.45E+12	1.45E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.26E+14	4.29E+21
SIDE DIR	90.0	5.27E+12	1.73E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.64E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 942.8 TO 1509.2 K
 ALTITUDE RANGE: 407.4 TO 417.7 KM

 *DATE: JULY 8, 1989 DAY OF YEAR: 189 *
 *CUMULATIVE EXPOSURE TIME: 1918 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.10E+09	3.04E+16
LONGERON	126.9	1.01E+05	3.29E+12
ROW 2	141.9	4.11E+00	2.31E+08
LONGERON	156.9	6.73E-04	7.97E+04
ROW 3	171.8	3.70E-06	7.83E+02
LONGERON	173.1	2.56E-06	6.52E+02
ROW 4	158.1	2.50E-04	4.96E+04
LONGERON	143.1	1.13E+00	1.23E+08
ROW 5	128.1	3.07E+04	1.63E+12
LONGERON	113.1	4.81E+08	1.59E+16
ROW 6	98.1	5.67E+11	1.78E+19
LONGERON	83.1	1.60E+13	5.51E+20
ROW 7	68.1	4.70E+13	1.63E+21
LONGERON	53.1	7.57E+13	2.62E+21
ROW 8	38.1	9.93E+13	3.43E+21
LONGERON	23.1	1.16E+14	4.01E+21
ROW 9	8.2	1.25E+14	4.32E+21
LONGERON	6.9	1.25E+14	4.33E+21
ROW 10	21.9	1.17E+14	4.05E+21
LONGERON	36.9	1.01E+14	3.49E+21
ROW 11	51.9	7.79E+13	2.69E+21
LONGERON	66.9	4.96E+13	1.71E+21
ROW 12	81.9	1.84E+13	6.33E+20
LONGERON	96.9	8.67E+11	2.70E+19
SPACE END	89.2	6.17E+12	2.08E+20
EARTH END	-90.8	4.43E+12	1.47E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.26E+14	4.37E+21
SIDE DIR	90.0	5.25E+12	1.76E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.65E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 910.2 TO 1498.9 K
 ALTITUDE RANGE: 406.4 TO 417.6 KM

 *DATE: JULY 15, 1989 DAY OF YEAR: 196 *
 *CUMULATIVE EXPOSURE TIME: 1925 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.16E+09	3.11E+16
LONGERON	126.9	1.11E+05	3.35E+12
ROW 2	141.9	4.12E+00	2.34E+08
LONGERON	156.9	5.68E-04	8.00E+04
ROW 3	171.8	2.55E-06	7.84E+02
LONGERON	173.1	1.47E-06	6.53E+02
ROW 4	158.1	1.28E-04	4.96E+04
LONGERON	143.1	5.85E-01	1.23E+08
ROW 5	128.1	1.91E+04	1.65E+12
LONGERON	113.1	4.14E+08	1.61E+16
ROW 6	98.1	5.67E+11	1.82E+19
LONGERON	83.1	1.62E+13	5.61E+20
ROW 7	68.1	4.78E+13	1.66E+21
LONGERON	53.1	7.70E+13	2.67E+21
ROW 8	38.1	1.01E+14	3.50E+21
LONGERON	23.1	1.18E+14	4.09E+21
ROW 9	8.2	1.27E+14	4.40E+21
LONGERON	6.9	1.27E+14	4.41E+21
ROW 10	21.9	1.19E+14	4.12E+21
LONGERON	36.9	1.03E+14	3.55E+21
ROW 11	51.9	7.92E+13	2.74E+21
LONGERON	66.9	5.04E+13	1.74E+21
ROW 12	81.9	1.87E+13	6.44E+20
LONGERON	96.9	8.74E+11	2.75E+19
SPACE END	89.2	6.26E+12	2.11E+20
EARTH END	-90.8	4.48E+12	1.50E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.28E+14	4.44E+21
SIDE DIR	90.0	5.32E+12	1.79E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.67E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 905.5 TO 1460.7 K
 ALTITUDE RANGE: 404.9 TO 416.0 KM

 *DATE: JULY 22, 1989 DAY OF YEAR: 203 *
 *CUMULATIVE EXPOSURE TIME: 1932 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.11E+09	3.18E+16
LONGERON	126.9	8.85E+04	3.41E+12
ROW 2	141.9	2.78E+00	2.35E+08
LONGERON	156.9	3.82E-04	8.03E+04
ROW 3	171.9	2.07E-06	7.86E+02
LONGERON	173.1	1.57E-06	6.54E+02
ROW 4	158.1	1.70E-04	4.97E+04
LONGERON	143.1	8.07E-01	1.24E+08
ROW 5	128.1	2.31E+04	1.66E+12
LONGERON	113.1	4.35E+08	1.64E+16
ROW 6	98.1	5.83E+11	1.85E+19
LONGERON	83.1	1.68E+13	5.71E+20
ROW 7	68.1	4.94E+13	1.69E+21
LONGERON	53.1	7.96E+13	2.72E+21
ROW 8	38.1	1.04E+14	3.56E+21
LONGERON	23.1	1.22E+14	4.16E+21
ROW 9	8.1	1.31E+14	4.48E+21
LONGERON	6.9	1.32E+14	4.49E+21
ROW 10	21.9	1.23E+14	4.20E+21
LONGERON	36.9	1.06E+14	3.62E+21
ROW 11	51.9	8.18E+13	2.79E+21
LONGERON	66.9	5.20E+13	1.77E+21
ROW 12	81.9	1.93E+13	6.56E+20
LONGERON	96.9	8.95E+11	2.81E+19
SPACE END	89.2	6.46E+12	2.15E+20
EARTH END	-90.8	4.62E+12	1.53E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.33E+14	4.52E+21
SIDE DIR	90.0	5.49E+12	1.82E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.73E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 911.2 TO 1457.9 K
 ALTITUDE RANGE: 404.6 TO 414.5 KM

 *DATE: JULY 29, 1989 DAY OF YEAR: 210 *
 *CUMULATIVE EXPOSURE TIME: 1939 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	7.48E+08	3.23E+16
LONGERON	126.9	3.57E+04	3.43E+12
ROW 2	141.9	8.47E-01	2.36E+08
LONGERON	156.9	1.23E-04	8.04E+04
ROW 3	171.9	8.72E-07	7.86E+02
LONGERON	173.0	9.48E-07	6.54E+02
ROW 4	158.1	1.45E-04	4.98E+04
LONGERON	143.1	8.79E-01	1.24E+08
ROW 5	128.1	2.64E+04	1.68E+12
LONGERON	113.1	4.26E+08	1.66E+16
ROW 6	98.1	5.52E+11	1.89E+19
LONGERON	83.1	1.64E+13	5.81E+20
ROW 7	68.1	4.84E+13	1.72E+21
LONGERON	53.1	7.79E+13	2.76E+21
ROW 8	38.1	1.02E+14	3.62E+21
LONGERON	23.1	1.19E+14	4.23E+21
ROW 9	8.1	1.28E+14	4.55E+21
LONGERON	7.0	1.29E+14	4.57E+21
ROW 10	21.9	1.20E+14	4.27E+21
LONGERON	36.9	1.04E+14	3.68E+21
ROW 11	51.9	8.00E+13	2.84E+21
LONGERON	66.9	5.08E+13	1.81E+21
ROW 12	81.9	1.88E+13	6.67E+20
LONGERON	96.9	8.25E+11	2.86E+19
SPACE END	89.2	6.24E+12	2.19E+20
EARTH END	-90.8	4.45E+12	1.55E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.30E+14	4.60E+21
SIDE DIR	90.0	5.30E+12	1.86E+20

AVERAGE ATOMIC OXYGEN DENSITY: 1.69E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 912.5 TO 1452.2 K
 ALTITUDE RANGE: 403.3 TO 412.1 KM

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*DATE:      AUGUST   5, 1989           DAY OF YEAR:  217 *
*CUMULATIVE EXPOSURE TIME: 1946 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	8.18E+08	3.28E+16
LONGERON	126.9	3.89E+04	3.45E+12
ROW 2	141.9	1.18E+00	2.37E+08
LONGERON	156.9	2.58E-04	8.05E+04
ROW 3	171.9	2.68E-06	7.88E+02
LONGERON	173.0	3.58E-06	6.57E+02
ROW 4	158.1	5.45E-04	5.02E+04
LONGERON	143.1	2.72E+00	1.26E+08
ROW 5	128.1	5.85E+04	1.71E+12
LONGERON	113.1	6.28E+08	1.70E+16
ROW 6	98.1	6.29E+11	1.93E+19
LONGERON	83.1	1.78E+13	5.92E+20
ROW 7	68.1	5.24E+13	1.75E+21
LONGERON	53.1	8.43E+13	2.81E+21
ROW 8	38.1	1.10E+14	3.69E+21
LONGERON	23.1	1.29E+14	4.31E+21
ROW 9	8.1	1.39E+14	4.64E+21
LONGERON	7.0	1.39E+14	4.65E+21
ROW 10	21.9	1.30E+14	4.35E+21
LONGERON	36.9	1.12E+14	3.75E+21
ROW 11	51.9	8.65E+13	2.89E+21
LONGERON	66.9	5.50E+13	1.84E+21
ROW 12	81.9	2.03E+13	6.79E+20
LONGERON	96.9	9.08E+11	2.91E+19
SPACE END	89.2	6.80E+12	2.23E+20
EARTH END	-90.8	4.87E+12	1.58E+20
	CONSTANT INCIDENCE ANGLE (DEGREES)		
RAM DIR	0.0	1.40E+14	4.69E+21
SIDE DIR	90.0	5.78E+12	1.89E+20

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AVERAGE ATOMIC OXYGEN DENSITY:  1.83E+08 ATOMS/CM**3
TEMPERATURE RANGE:  917.6 TO  1489.4 K
ALTITUDE RANGE:     401.8 TO  411.3 KM

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 *DATE: AUGUST 12, 1989 DAY OF YEAR: 224 *
 *CUMULATIVE EXPOSURE TIME: 1953 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.71E+09	3.38E+16
LONGERON	126.9	1.42E+05	3.54E+12
ROW 2	141.9	6.99E+00	2.41E+08
LONGERON	156.9	2.06E-03	8.18E+04
ROW 3	171.9	2.28E-05	8.02E+02
LONGERON	173.0	2.64E-05	6.73E+02
ROW 4	158.1	2.96E-03	5.19E+04
LONGERON	143.1	1.01E+01	1.32E+08
ROW 5	128.1	1.48E+05	1.80E+12
LONGERON	113.1	1.15E+09	1.77E+16
ROW 6	98.1	8.74E+11	1.98E+19
LONGERON	83.1	2.20E+13	6.05E+20
ROW 7	68.1	6.42E+13	1.79E+21
LONGERON	53.1	1.03E+14	2.88E+21
ROW 8	38.1	1.35E+14	3.77E+21
LONGERON	23.1	1.58E+14	4.41E+21
ROW 9	8.1	1.70E+14	4.74E+21
LONGERON	7.0	1.71E+14	4.75E+21
ROW 10	21.9	1.60E+14	4.44E+21
LONGERON	36.9	1.38E+14	3.83E+21
ROW 11	51.9	1.06E+14	2.96E+21
LONGERON	66.9	6.75E+13	1.88E+21
ROW 12	81.9	2.51E+13	6.95E+20
LONGERON	96.9	1.26E+12	2.99E+19
SPACE END	89.2	8.60E+12	2.28E+20
EARTH END	-90.8	6.23E+12	1.62E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	1.72E+14	4.79E+21
SIDE DIR	90.0	7.36E+12	1.93E+20

AVERAGE ATOMIC OXYGEN DENSITY: 2.24E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 1007.0 TO 1585.0 K
 ALTITUDE RANGE: 400.0 TO 410.8 KM

 *DATE: AUGUST 19, 1989 DAY OF YEAR: 231 *
 *CUMULATIVE EXPOSURE TIME: 1960 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.30E+09	3.52E+16
LONGERON	126.9	2.65E+05	3.70E+12
ROW 2	141.9	1.63E+01	2.51E+08
LONGERON	156.9	4.59E-03	8.45E+04
ROW 3	171.9	4.03E-05	8.26E+02
LONGERON	173.1	3.50E-05	6.94E+02
ROW 4	158.1	3.09E-03	5.38E+04
LONGERON	143.1	9.19E+00	1.38E+08
ROW 5	128.1	1.38E+05	1.88E+12
LONGERON	113.1	1.24E+09	1.85E+16
ROW 6	98.1	9.86E+11	2.04E+19
LONGERON	83.1	2.43E+13	6.20E+20
ROW 7	68.1	7.10E+13	1.83E+21
LONGERON	53.1	1.14E+14	2.94E+21
ROW 8	38.1	1.50E+14	3.86E+21
LONGERON	23.1	1.75E+14	4.51E+21
ROW 9	8.1	1.88E+14	4.86E+21
LONGERON	6.9	1.89E+14	4.87E+21
ROW 10	21.9	1.77E+14	4.55E+21
LONGERON	36.9	1.52E+14	3.92E+21
ROW 11	51.9	1.17E+14	3.03E+21
LONGERON	66.9	7.47E+13	1.92E+21
ROW 12	81.9	2.78E+13	7.11E+20
LONGERON	96.9	1.45E+12	3.08E+19
SPACE END	89.2	9.60E+12	2.34E+20
EARTH END	-90.8	6.97E+12	1.66E+20

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	1.90E+14	4.91E+21
SIDE DIR	90.0	8.22E+12	1.98E+20

AVERAGE ATOMIC OXYGEN DENSITY: 2.48E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 1035.5 TO 1592.8 K
 ALTITUDE RANGE: 398.5 TO 408.6 KM

 *DATE: AUGUST 26, 1989 DAY OF YEAR: 238 *
 *CUMULATIVE EXPOSURE TIME: 1967 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.81E+09	3.63E+16
LONGERON	126.9	1.86E+05	3.81E+12
ROW 2	141.9	8.48E+00	2.56E+08
LONGERON	156.9	1.53E-03	8.55E+04
ROW 3	171.8	8.56E-06	8.31E+02
LONGERON	173.1	5.37E-06	6.97E+02
ROW 4	158.1	4.36E-04	5.41E+04
LONGERON	143.1	1.62E+00	1.39E+08
ROW 5	128.1	4.12E+04	1.91E+12
LONGERON	113.1	7.30E+08	1.89E+16
ROW 6	98.1	8.62E+11	2.09E+19
LONGERON	83.1	2.33E+13	6.34E+20
ROW 7	68.1	6.83E+13	1.87E+21
LONGERON	53.1	1.10E+14	3.01E+21
ROW 8	38.1	1.44E+14	3.95E+21
LONGERON	23.1	1.69E+14	4.61E+21
ROW 9	8.2	1.81E+14	4.97E+21
LONGERON	6.9	1.82E+14	4.98E+21
ROW 10	21.9	1.70E+14	4.65E+21
LONGERON	36.9	1.47E+14	4.01E+21
ROW 11	51.9	1.13E+14	3.09E+21
LONGERON	66.9	7.20E+13	1.97E+21
ROW 12	81.9	2.68E+13	7.28E+20
LONGERON	96.9	1.31E+12	3.16E+19
SPACE END	89.2	9.06E+12	2.40E+20
EARTH END	-90.8	6.53E+12	1.70E+20

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	1.83E+14	5.02E+21
SIDE DIR	90.0	7.73E+12	2.03E+20

AVERAGE ATOMIC OXYGEN DENSITY: 2.39E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 939.0 TO 1535.7 K
 ALTITUDE RANGE: 395.6 TO 405.6 KM

 *DATE: SEPTEMBER 2, 1989 DAY OF YEAR: 245 *
 *CUMULATIVE EXPOSURE TIME: 1974 DAYS *

AVERAGES AND RANGES ARE BASED ON 1751 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.22E+09	3.76E+16
LONGERON	126.9	2.52E+05	3.96E+12
ROW 2	141.9	1.21E+01	2.63E+08
LONGERON	156.9	2.31E-03	8.69E+04
ROW 3	171.8	1.40E-05	8.40E+02
LONGERON	173.1	9.28E-06	7.03E+02
ROW 4	158.1	7.18E-04	5.45E+04
LONGERON	143.1	2.27E+00	1.40E+08
ROW 5	128.1	4.93E+04	1.94E+12
LONGERON	113.1	8.38E+08	1.94E+16
ROW 6	98.1	9.70E+11	2.15E+19
LONGERON	83.1	2.58E+13	6.50E+20
ROW 7	68.1	7.57E+13	1.92E+21
LONGERON	53.1	1.22E+14	3.09E+21
ROW 8	38.1	1.60E+14	4.04E+21
LONGERON	23.1	1.87E+14	4.73E+21
ROW 9	8.2	2.01E+14	5.09E+21
LONGERON	6.9	2.02E+14	5.10E+21
ROW 10	21.9	1.88E+14	4.77E+21
LONGERON	36.9	1.62E+14	4.11E+21
ROW 11	51.9	1.25E+14	3.17E+21
LONGERON	66.9	7.97E+13	2.02E+21
ROW 12	81.9	2.96E+13	7.46E+20
LONGERON	96.9	1.47E+12	3.25E+19
SPACE END	89.2	1.01E+13	2.46E+20
EARTH END	-90.8	7.26E+12	1.75E+20

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	2.03E+14	5.14E+21
SIDE DIR	90.0	8.60E+12	2.08E+20

AVERAGE ATOMIC OXYGEN DENSITY: 2.65E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 948.7 TO 1507.1 K
 ALTITUDE RANGE: 394.2 TO 406.8 KM

 *DATE: SEPTEMBER 9, 1989 DAY OF YEAR: 252 *
 *CUMULATIVE EXPOSURE TIME: 1981 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.53E+09	3.98E+16
LONGERON	126.9	4.58E+05	4.24E+12
ROW 2	141.9	3.05E+01	2.82E+08
LONGERON	156.9	9.86E-03	9.28E+04
ROW 3	171.9	1.03E-04	9.02E+02
LONGERON	173.0	9.76E-05	7.62E+02
ROW 4	158.1	7.98E-03	5.93E+04
LONGERON	143.1	1.86E+01	1.51E+08
ROW 5	128.1	2.10E+05	2.07E+12
LONGERON	113.1	1.72E+09	2.04E+16
ROW 6	98.1	1.35E+12	2.23E+19
LONGERON	83.1	3.24E+13	6.69E+20
ROW 7	68.1	9.46E+13	1.97E+21
LONGERON	53.1	1.52E+14	3.18E+21
ROW 8	38.1	2.00E+14	4.16E+21
LONGERON	23.1	2.33E+14	4.87E+21
ROW 9	8.1	2.51E+14	5.24E+21
LONGERON	7.0	2.52E+14	5.25E+21
ROW 10	21.9	2.35E+14	4.91E+21
LONGERON	36.9	2.03E+14	4.23E+21
ROW 11	51.9	1.56E+14	3.27E+21
LONGERON	66.9	9.95E+13	2.08E+21
ROW 12	81.9	3.71E+13	7.68E+20
LONGERON	96.9	1.99E+12	3.37E+19
SPACE END	89.2	1.29E+13	2.54E+20
EARTH END	-90.8	9.38E+12	1.80E+20

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	2.54E+14	5.29E+21
SIDE DIR	90.0	1.10E+13	2.15E+20

AVERAGE ATOMIC OXYGEN DENSITY: 3.31E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 1050.2 TO 1582.1 K
 ALTITUDE RANGE: 391.9 TO 405.9 KM

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*DATE:  SEPTEMBER 16, 1989          DAY OF YEAR:  259 *
*CUMULATIVE EXPOSURE TIME: 1988  DAYS                    *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.00E+09	4.16E+16
LONGERON	126.9	2.64E+05	4.40E+12
ROW 2	141.9	1.37E+01	2.90E+08
LONGERON	156.9	4.64E-03	9.56E+04
ROW 3	171.9	5.87E-05	9.37E+02
LONGERON	173.0	7.08E-05	8.04E+02
ROW 4	158.1	7.35E-03	6.38E+04
LONGERON	143.1	2.09E+01	1.64E+08
ROW 5	128.1	2.57E+05	2.22E+12
LONGERON	113.1	1.89E+09	2.16E+16
ROW 6	98.1	1.38E+12	2.31E+19
LONGERON	83.1	3.35E+13	6.90E+20
ROW 7	68.1	9.75E+13	2.03E+21
LONGERON	53.1	1.57E+14	3.27E+21
ROW 8	38.1	2.06E+14	4.29E+21
LONGERON	23.1	2.40E+14	5.01E+21
ROW 9	8.1	2.59E+14	5.40E+21
LONGERON	7.0	2.59E+14	5.41E+21
ROW 10	21.9	2.42E+14	5.06E+21
LONGERON	36.9	2.09E+14	4.36E+21
ROW 11	51.9	1.61E+14	3.36E+21
LONGERON	66.9	1.02E+14	2.14E+21
ROW 12	81.9	3.81E+13	7.91E+20
LONGERON	96.9	2.00E+12	3.49E+19
SPACE END	89.2	1.32E+13	2.62E+20
EARTH END	-90.8	9.60E+12	1.86E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	2.61E+14	5.45E+21
SIDE DIR	90.0	1.13E+13	2.22E+20

AVERAGE ATOMIC OXYGEN DENSITY: 3.41E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 1045.2 TO 1578.7 K
 ALTITUDE RANGE: 391.7 TO 401.8 KM

 *DATE: SEPTEMBER 23, 1989 DAY OF YEAR: 266 *
 *CUMULATIVE EXPOSURE TIME: 1995 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.29E+09	4.23E+16
LONGERON	126.9	4.73E+04	4.43E+12
ROW 2	141.9	1.02E+00	2.91E+08
LONGERON	156.9	1.88E-04	9.57E+04
ROW 3	171.9	1.85E-06	9.38E+02
LONGERON	173.0	2.54E-06	8.06E+02
ROW 4	158.1	4.25E-04	6.40E+04
LONGERON	143.1	2.47E+00	1.65E+08
ROW 5	128.1	6.55E+04	2.26E+12
LONGERON	113.1	8.95E+08	2.21E+16
ROW 6	98.1	9.89E+11	2.37E+19
LONGERON	83.1	2.80E+13	7.06E+20
ROW 7	68.1	8.22E+13	2.08E+21
LONGERON	53.1	1.32E+14	3.35E+21
ROW 8	38.1	1.73E+14	4.39E+21
LONGERON	23.1	2.03E+14	5.14E+21
ROW 9	8.1	2.18E+14	5.53E+21
LONGERON	7.0	2.19E+14	5.54E+21
ROW 10	21.9	2.04E+14	5.18E+21
LONGERON	36.9	1.76E+14	4.46E+21
ROW 11	51.9	1.36E+14	3.44E+21
LONGERON	66.9	8.63E+13	2.19E+21
ROW 12	81.9	3.20E+13	8.10E+20
LONGERON	96.9	1.45E+12	3.57E+19
SPACE END	89.2	1.07E+13	2.68E+20
EARTH END	-90.8	7.67E+12	1.91E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	2.20E+14	5.58E+21
SIDE DIR	90.0	9.11E+12	2.27E+20

AVERAGE ATOMIC OXYGEN DENSITY: 2.87E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 936.5 TO 1484.4 K
 ALTITUDE RANGE: 388.4 TO 397.7 KM

 *DATE: SEPTEMBER 30, 1989 DAY OF YEAR: 273 *
 *CUMULATIVE EXPOSURE TIME: 2002 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.32E+09	4.31E+16
LONGERON	126.9	5.87E+04	4.46E+12
ROW 2	141.9	1.76E+00	2.92E+08
LONGERON	156.9	3.38E-04	9.59E+04
ROW 3	171.9	2.69E-06	9.40E+02
LONGERON	173.1	2.78E-06	8.08E+02
ROW 4	158.1	3.71E-04	6.43E+04
LONGERON	143.1	1.95E+00	1.66E+08
ROW 5	128.1	5.31E+04	2.29E+12
LONGERON	113.1	8.28E+08	2.26E+16
ROW 6	98.1	1.02E+12	2.44E+19
LONGERON	83.1	2.92E+13	7.24E+20
ROW 7	68.1	8.60E+13	2.13E+21
LONGERON	53.1	1.38E+14	3.44E+21
ROW 8	38.1	1.81E+14	4.50E+21
LONGERON	23.1	2.12E+14	5.26E+21
ROW 9	8.1	2.28E+14	5.67E+21
LONGERON	6.9	2.29E+14	5.68E+21
ROW 10	21.9	2.14E+14	5.31E+21
LONGERON	36.9	1.84E+14	4.58E+21
ROW 11	51.9	1.42E+14	3.53E+21
LONGERON	66.9	9.04E+13	2.25E+21
ROW 12	81.9	3.35E+13	8.31E+20
LONGERON	96.9	1.51E+12	3.67E+19
SPACE END	89.2	1.12E+13	2.75E+20
EARTH END	-90.8	8.00E+12	1.96E+20

↙ CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	2.30E+14	5.72E+21
SIDE DIR	90.0	9.50E+12	2.33E+20

AVERAGE ATOMIC OXYGEN DENSITY: 3.00E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 940.2 TO 1441.7 K
 ALTITUDE RANGE: 386.4 TO 397.7 KM

 *DATE: OCTOBER 7, 1989 DAY OF YEAR: 280 *
 *CUMULATIVE EXPOSURE TIME: 2009 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.64E+09	4.47E+16
LONGERON	126.9	2.60E+05	4.62E+12
ROW 2	141.9	1.30E+01	3.00E+08
LONGERON	156.9	2.66E-03	9.75E+04
ROW 3	171.8	1.69E-05	9.50E+02
LONGERON	173.1	1.20E-05	8.15E+02
ROW 4	158.1	1.04E-03	6.49E+04
LONGERON	143.1	3.71E+00	1.69E+08
ROW 5	128.1	8.14E+04	2.34E+12
LONGERON	113.1	1.22E+09	2.34E+16
ROW 6	98.1	1.32E+12	2.52E+19
LONGERON	83.1	3.50E+13	7.45E+20
ROW 7	68.1	1.03E+14	2.20E+21
LONGERON	53.1	1.66E+14	3.54E+21
ROW 8	38.1	2.17E+14	4.63E+21
LONGERON	23.1	2.54E+14	5.42E+21
ROW 9	8.2	2.73E+14	5.83E+21
LONGERON	6.9	2.74E+14	5.85E+21
ROW 10	21.9	2.56E+14	5.46E+21
LONGERON	36.9	2.21E+14	4.71E+21
ROW 11	51.9	1.70E+14	3.63E+21
LONGERON	66.9	1.08E+14	2.31E+21
ROW 12	81.9	4.02E+13	8.55E+20
LONGERON	96.9	1.98E+12	3.79E+19
SPACE END	89.2	1.37E+13	2.83E+20
EARTH END	-90.8	9.87E+12	2.02E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	2.76E+14	5.89E+21
SIDE DIR	90.0	1.17E+13	2.40E+20

AVERAGE ATOMIC OXYGEN DENSITY: 3.59E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 1006.6 TO 1478.7 K
 ALTITUDE RANGE: 384.7 TO 396.6 KM

 *DATE: OCTOBER 14, 1989 DAY OF YEAR: 287 *
 *CUMULATIVE EXPOSURE TIME: 2016 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.68E+09	4.70E+16
LONGERON	126.9	5.06E+05	4.93E+12
ROW 2	141.9	3.02E+01	3.18E+08
LONGERON	156.9	6.19E-03	1.01E+05
ROW 3	171.8	3.40E-05	9.71E+02
LONGERON	173.1	1.87E-05	8.26E+02
ROW 4	158.1	1.25E-03	6.56E+04
LONGERON	143.1	3.79E+00	1.71E+08
ROW 5	128.1	8.35E+04	2.39E+12
LONGERON	113.1	1.39E+09	2.42E+16
ROW 6	98.1	1.50E+12	2.61E+19
LONGERON	83.1	3.90E+13	7.69E+20
ROW 7	68.1	1.14E+14	2.27E+21
LONGERON	53.1	1.84E+14	3.65E+21
ROW 8	38.1	2.41E+14	4.78E+21
LONGERON	23.1	2.82E+14	5.59E+21
ROW 9	8.2	3.04E+14	6.01E+21
LONGERON	6.9	3.04E+14	6.03E+21
ROW 10	21.9	2.85E+14	5.64E+21
LONGERON	36.9	2.45E+14	4.86E+21
ROW 11	51.9	1.89E+14	3.75E+21
LONGERON	66.9	1.20E+14	2.38E+21
ROW 12	81.9	4.48E+13	8.82E+20
LONGERON	96.9	2.27E+12	3.92E+19
SPACE END	89.2	1.53E+13	2.92E+20
EARTH END	-90.8	1.11E+13	2.08E+20

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	3.07E+14	6.08E+21
SIDE DIR	90.0	1.31E+13	2.48E+20

AVERAGE ATOMIC OXYGEN DENSITY: 3.99E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 1012.1 TO 1497.4 K
 ALTITUDE RANGE: 381.7 TO 394.7 KM

 *DATE: OCTOBER 21, 1989 DAY OF YEAR: 294 *
 *CUMULATIVE EXPOSURE TIME: 2023 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.55E+09	4.97E+16
LONGERON	126.9	6.21E+05	5.30E+12
ROW 2	141.9	3.91E+01	3.41E+08
LONGERON	156.9	9.72E-03	1.07E+05
ROW 3	171.9	7.09E-05	1.01E+03
LONGERON	173.1	5.13E-05	8.57E+02
ROW 4	158.1	3.94E-03	6.80E+04
LONGERON	143.1	1.09E+01	1.78E+08
ROW 5	128.1	1.75E+05	2.50E+12
LONGERON	113.1	1.99E+09	2.54E+16
ROW 6	98.1	1.76E+12	2.71E+19
LONGERON	83.1	4.32E+13	7.95E+20
ROW 7	68.1	1.26E+14	2.34E+21
LONGERON	53.1	2.03E+14	3.77E+21
ROW 8	38.1	2.66E+14	4.94E+21
LONGERON	23.1	3.11E+14	5.78E+21
ROW 9	8.1	3.35E+14	6.22E+21
LONGERON	6.9	3.36E+14	6.23E+21
ROW 10	21.9	3.14E+14	5.83E+21
LONGERON	36.9	2.71E+14	5.02E+21
ROW 11	51.9	2.09E+14	3.87E+21
LONGERON	66.9	1.33E+14	2.46E+21
ROW 12	81.9	4.95E+13	9.12E+20
LONGERON	96.9	2.60E+12	4.08E+19
SPACE END	89.2	1.71E+13	3.03E+20
EARTH END	-90.8	1.24E+13	2.16E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.39E+14	6.28E+21
SIDE DIR	90.0	1.46E+13	2.57E+20

AVERAGE ATOMIC OXYGEN DENSITY: 4.41E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 1047.4 TO 1593.4 K
 ALTITUDE RANGE: 379.4 TO 391.0 KM

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*DATE:    OCTOBER 28, 1989          DAY OF YEAR: 301 *
*CUMULATIVE EXPOSURE TIME: 2030 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.71E+09	5.13E+16
LONGERON	126.9	2.19E+05	5.43E+12
ROW 2	141.9	9.28E+00	3.47E+08
LONGERON	156.9	2.00E-03	1.08E+05
ROW 3	171.9	1.62E-05	1.02E+03
LONGERON	173.0	1.53E-05	8.66E+02
ROW 4	158.1	1.65E-03	6.90E+04
LONGERON	143.1	6.34E+00	1.81E+08
ROW 5	128.1	1.25E+05	2.57E+12
LONGERON	113.1	1.47E+09	2.63E+16
ROW 6	98.1	1.47E+12	2.80E+19
LONGERON	83.1	3.91E+13	8.19E+20
ROW 7	68.1	1.15E+14	2.41E+21
LONGERON	53.1	1.85E+14	3.88E+21
ROW 8	38.1	2.42E+14	5.09E+21
LONGERON	23.1	2.83E+14	5.95E+21
ROW 9	8.1	3.04E+14	6.40E+21
LONGERON	7.0	3.05E+14	6.42E+21
ROW 10	21.9	2.85E+14	6.00E+21
LONGERON	36.9	2.46E+14	5.17E+21
ROW 11	51.9	1.90E+14	3.99E+21
LONGERON	66.9	1.20E+14	2.54E+21
ROW 12	81.9	4.47E+13	9.39E+20
LONGERON	96.9	2.16E+12	4.21E+19
SPACE END	89.2	1.52E+13	3.12E+20
EARTH END	-90.8	1.09E+13	2.22E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.07E+14	6.47E+21
SIDE DIR	90.0	1.29E+13	2.65E+20

AVERAGE ATOMIC OXYGEN DENSITY: 4.00E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 984.7 TO 1582.6 K
 ALTITUDE RANGE: 376.5 TO 387.0 KM

 *DATE: NOVEMBER 4, 1989 DAY OF YEAR: 308 *
 *CUMULATIVE EXPOSURE TIME: 2037 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.24E+09	5.27E+16
LONGERON	126.9	1.32E+05	5.51E+12
ROW 2	141.9	4.53E+00	3.50E+08
LONGERON	156.9	1.01E-03	1.09E+05
ROW 3	171.9	1.04E-05	1.03E+03
LONGERON	173.0	1.34E-05	8.75E+02
ROW 4	158.1	1.86E-03	7.01E+04
LONGERON	143.1	8.06E+00	1.86E+08
ROW 5	128.1	1.51E+05	2.66E+12
LONGERON	113.1	1.49E+09	2.72E+16
ROW 6	98.1	1.40E+12	2.89E+19
LONGERON	83.1	3.79E+13	8.42E+20
ROW 7	68.1	1.11E+14	2.48E+21
LONGERON	53.1	1.79E+14	3.99E+21
ROW 8	38.1	2.34E+14	5.23E+21
LONGERON	23.1	2.74E+14	6.11E+21
ROW 9	8.1	2.95E+14	6.58E+21
LONGERON	7.0	2.96E+14	6.60E+21
ROW 10	21.9	2.76E+14	6.17E+21
LONGERON	36.9	2.38E+14	5.31E+21
ROW 11	51.9	1.84E+14	4.10E+21
LONGERON	66.9	1.17E+14	2.61E+21
ROW 12	81.9	4.33E+13	9.65E+20
LONGERON	96.9	2.05E+12	4.34E+19
SPACE END	89.2	1.46E+13	3.21E+20
EARTH END	-90.8	1.05E+13	2.29E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	2.98E+14	6.65E+21
SIDE DIR	90.0	1.25E+13	2.72E+20

AVERAGE ATOMIC OXYGEN DENSITY: 3.88E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 989.9 TO 1560.4 K
 ALTITUDE RANGE: 373.7 TO 384.3 KM

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*DATE:  NOVEMBER 11, 1989          DAY OF YEAR: 315 *
*CUMULATIVE EXPOSURE TIME: 2044 DAYS                      *
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AVERAGES AND RANGES ARE BASED ON 1751 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.41E+09	5.48E+16
LONGERON	126.9	2.84E+05	5.69E+12
ROW 2	141.9	1.51E+01	3.59E+08
LONGERON	156.9	4.95E-03	1.12E+05
ROW 3	171.9	6.00E-05	1.07E+03
LONGERON	173.1	7.17E-05	9.18E+02
ROW 4	158.1	7.78E-03	7.49E+04
LONGERON	143.1	2.40E+01	2.01E+08
ROW 5	128.1	3.14E+05	2.85E+12
LONGERON	113.1	2.28E+09	2.86E+16
ROW 6	98.1	1.71E+12	2.99E+19
LONGERON	83.1	4.30E+13	8.68E+20
ROW 7	68.1	1.26E+14	2.55E+21
LONGERON	53.1	2.02E+14	4.11E+21
ROW 8	38.1	2.65E+14	5.39E+21
LONGERON	23.1	3.10E+14	6.30E+21
ROW 9	8.1	3.33E+14	6.78E+21
LONGERON	6.9	3.34E+14	6.80E+21
ROW 10	21.9	3.12E+14	6.35E+21
LONGERON	36.9	2.69E+14	5.48E+21
ROW 11	51.9	2.08E+14	4.23E+21
LONGERON	66.9	1.32E+14	2.69E+21
ROW 12	81.9	4.91E+13	9.95E+20
LONGERON	96.9	2.49E+12	4.49E+19
SPACE END	89.2	1.69E+13	3.31E+20
EARTH END	-90.8	1.22E+13	2.36E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.37E+14	6.85E+21
SIDE DIR	90.0	1.44E+13	2.81E+20

AVERAGE ATOMIC OXYGEN DENSITY: 4.38E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 1045.2 TO 1629.2 K
 ALTITUDE RANGE: 369.8 TO 382.0 KM


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*DATE:  NOVEMBER 18, 1989          DAY OF YEAR:  322 *
*CUMULATIVE EXPOSURE TIME: 2051  DAYS                *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.25E+09	5.73E+16
LONGERON	126.9	4.85E+05	5.98E+12
ROW 2	141.9	3.13E+01	3.78E+08
LONGERON	156.9	9.96E-03	1.18E+05
ROW 3	171.8	1.01E-04	1.13E+03
LONGERON	173.1	9.57E-05	9.76E+02
ROW 4	158.1	8.44E-03	8.00E+04
LONGERON	143.1	2.29E+01	2.15E+08
ROW 5	128.1	2.95E+05	3.03E+12
LONGERON	113.1	2.36E+09	3.00E+16
ROW 6	98.1	1.85E+12	3.10E+19
LONGERON	83.1	4.62E+13	8.96E+20
ROW 7	68.1	1.35E+14	2.64E+21
LONGERON	53.1	2.17E+14	4.24E+21
ROW 8	38.1	2.85E+14	5.56E+21
LONGERON	23.1	3.33E+14	6.50E+21
ROW 9	8.2	3.59E+14	7.00E+21
LONGERON	6.9	3.60E+14	7.02E+21
ROW 10	21.9	3.36E+14	6.56E+21
LONGERON	36.9	2.90E+14	5.65E+21
ROW 11	51.9	2.24E+14	4.36E+21
LONGERON	66.9	1.42E+14	2.77E+21
ROW 12	81.9	5.30E+13	1.03E+21
LONGERON	96.9	2.73E+12	4.65E+19
SPACE END	89.2	1.82E+13	3.42E+20
EARTH END	-90.8	1.32E+13	2.44E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.62E+14	7.07E+21
SIDE DIR	90.0	1.56E+13	2.90E+20

AVERAGE ATOMIC OXYGEN DENSITY: 4.71E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 1025.9 TO 1635.2 K
 ALTITUDE RANGE: 365.5 TO 377.6 KM

 *DATE: NOVEMBER 25, 1989 DAY OF YEAR: 329 *
 *CUMULATIVE EXPOSURE TIME: 2058 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.78E+09	6.02E+16
LONGERON	126.9	7.38E+05	6.43E+12
ROW 2	141.9	5.12E+01	4.09E+08
LONGERON	156.9	1.29E-02	1.26E+05
ROW 3	171.8	8.92E-05	1.18E+03
LONGERON	173.1	5.94E-05	1.01E+03
ROW 4	158.1	4.32E-03	8.26E+04
LONGERON	143.1	1.19E+01	2.22E+08
ROW 5	128.1	1.88E+05	3.15E+12
LONGERON	113.1	2.03E+09	3.12E+16
ROW 6	98.1	1.84E+12	3.21E+19
LONGERON	83.1	4.70E+13	9.24E+20
ROW 7	68.1	1.38E+14	2.72E+21
LONGERON	53.1	2.22E+14	4.38E+21
ROW 8	38.1	2.91E+14	5.74E+21
LONGERON	23.1	3.40E+14	6.71E+21
ROW 9	8.2	3.66E+14	7.22E+21
LONGERON	6.9	3.67E+14	7.24E+21
ROW 10	21.9	3.43E+14	6.77E+21
LONGERON	36.9	2.96E+14	5.83E+21
ROW 11	51.9	2.28E+14	4.50E+21
LONGERON	66.9	1.45E+14	2.86E+21
ROW 12	81.9	5.41E+13	1.06E+21
LONGERON	96.9	2.77E+12	4.82E+19
SPACE END	89.2	1.85E+13	3.53E+20
EARTH END	-90.8	1.34E+13	2.52E+20

CONSTANT
 INCIDENCE ANGLE
 (DEGREES)

RAM DIR	0.0	3.70E+14	7.29E+21
SIDE DIR	90.0	1.58E+13	3.00E+20

AVERAGE ATOMIC OXYGEN DENSITY: 4.81E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 1006.2 TO 1618.6 K
 ALTITUDE RANGE: 360.8 TO 373.1 KM

 *DATE: DECEMBER 2, 1989 DAY OF YEAR: 336 *
 *CUMULATIVE EXPOSURE TIME: 2065 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	4.79E+09	6.31E+16
LONGERON	126.9	7.60E+05	6.89E+12
ROW 2	141.9	5.47E+01	4.42E+08
LONGERON	156.9	1.44E-02	1.35E+05
ROW 3	171.9	1.03E-04	1.24E+03
LONGERON	173.1	6.94E-05	1.05E+03
ROW 4	158.1	4.87E-03	8.55E+04
LONGERON	143.1	1.26E+01	2.29E+08
ROW 5	128.1	1.88E+05	3.26E+12
LONGERON	113.1	2.02E+09	3.25E+16
ROW 6	98.1	1.86E+12	3.33E+19
LONGERON	83.1	4.78E+13	9.53E+20
ROW 7	68.1	1.40E+14	2.80E+21
LONGERON	53.1	2.25E+14	4.51E+21
ROW 8	38.1	2.95E+14	5.92E+21
LONGERON	23.1	3.45E+14	6.92E+21
ROW 9	8.1	3.71E+14	7.44E+21
LONGERON	6.9	3.72E+14	7.46E+21
ROW 10	21.9	3.48E+14	6.98E+21
LONGERON	36.9	3.00E+14	6.01E+21
ROW 11	51.9	2.31E+14	4.64E+21
LONGERON	66.9	1.47E+14	2.95E+21
ROW 12	81.9	5.48E+13	1.09E+21
LONGERON	96.9	2.78E+12	4.99E+19
SPACE END	89.2	1.87E+13	3.65E+20
EARTH END	-90.8	1.35E+13	2.61E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.75E+14	7.52E+21
SIDE DIR	90.0	1.60E+13	3.10E+20

AVERAGE ATOMIC OXYGEN DENSITY: 4.87E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 1000.6 TO 1638.3 K
 ALTITUDE RANGE: 356.9 TO 370.1 KM

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*DATE:  DECEMBER  9, 1989          DAY OF YEAR:  343 *
*CUMULATIVE EXPOSURE TIME: 2072 DAYS                    *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.06E+09	6.50E+16
LONGERON	126.9	3.24E+05	7.08E+12
ROW 2	141.9	1.70E+01	4.52E+08
LONGERON	156.9	3.93E-03	1.37E+05
ROW 3	171.9	2.94E-05	1.26E+03
LONGERON	173.0	2.34E-05	1.07E+03
ROW 4	158.1	2.08E-03	8.68E+04
LONGERON	143.1	6.93E+00	2.34E+08
ROW 5	128.1	1.27E+05	3.34E+12
LONGERON	113.1	1.49E+09	3.34E+16
ROW 6	98.1	1.59E+12	3.42E+19
LONGERON	83.1	4.45E+13	9.80E+20
ROW 7	68.1	1.31E+14	2.88E+21
LONGERON	53.1	2.10E+14	4.64E+21
ROW 8	38.1	2.75E+14	6.08E+21
LONGERON	23.1	3.22E+14	7.11E+21
ROW 9	8.1	3.46E+14	7.65E+21
LONGERON	7.0	3.47E+14	7.67E+21
ROW 10	21.9	3.25E+14	7.17E+21
LONGERON	36.9	2.80E+14	6.18E+21
ROW 11	51.9	2.16E+14	4.77E+21
LONGERON	66.9	1.37E+14	3.03E+21
ROW 12	81.9	5.08E+13	1.12E+21
LONGERON	96.9	2.37E+12	5.13E+19
SPACE END	89.2	1.71E+13	3.75E+20
EARTH END	-90.8	1.23E+13	2.68E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.50E+14	7.73E+21
SIDE DIR	90.0	1.46E+13	3.19E+20

AVERAGE ATOMIC OXYGEN DENSITY: 4.55E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 938.9 TO 1627.6 K
 ALTITUDE RANGE: 352.3 TO 366.7 KM

 *DATE: DECEMBER 16, 1989 DAY OF YEAR: 350 *
 *CUMULATIVE EXPOSURE TIME: 2079 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	1.68E+09	6.60E+16
LONGERON	126.9	8.81E+04	7.14E+12
ROW 2	141.9	2.21E+00	4.54E+08
LONGERON	156.9	2.96E-04	1.37E+05
ROW 3	171.9	1.93E-06	1.26E+03
LONGERON	173.0	2.09E-06	1.07E+03
ROW 4	158.1	3.37E-04	8.70E+04
LONGERON	143.1	2.18E+00	2.35E+08
ROW 5	128.1	6.74E+04	3.38E+12
LONGERON	113.1	1.01E+09	3.40E+16
ROW 6	98.1	1.29E+12	3.50E+19
LONGERON	83.1	4.03E+13	1.00E+21
ROW 7	68.1	1.19E+14	2.96E+21
LONGERON	53.1	1.91E+14	4.76E+21
ROW 8	38.1	2.51E+14	6.23E+21
LONGERON	23.1	2.93E+14	7.29E+21
ROW 9	8.1	3.16E+14	7.84E+21
LONGERON	7.0	3.16E+14	7.87E+21
ROW 10	21.9	2.96E+14	7.35E+21
LONGERON	36.9	2.55E+14	6.34E+21
ROW 11	51.9	1.97E+14	4.89E+21
LONGERON	66.9	1.25E+14	3.11E+21
ROW 12	81.9	4.61E+13	1.15E+21
LONGERON	96.9	1.94E+12	5.25E+19
SPACE END	89.2	1.52E+13	3.84E+20
EARTH END	-90.8	1.08E+13	2.74E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.19E+14	7.92E+21
SIDE DIR	90.0	1.28E+13	3.26E+20

AVERAGE ATOMIC OXYGEN DENSITY: 4.14E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 900.0 TO 1500.5 K
 ALTITUDE RANGE: 350.0 TO 362.2 KM

 *DATE: DECEMBER 23, 1989 DAY OF YEAR: 357 *
 *CUMULATIVE EXPOSURE TIME: 2086 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.27E+09	6.74E+16
LONGERON	126.9	1.42E+05	7.22E+12
ROW 2	141.9	5.38E+00	4.57E+08
LONGERON	156.9	1.22E-03	1.38E+05
ROW 3	171.9	1.17E-05	1.27E+03
LONGERON	173.0	1.37E-05	1.08E+03
ROW 4	158.1	1.80E-03	8.81E+04
LONGERON	143.1	7.83E+00	2.40E+08
ROW 5	128.1	1.54E+05	3.47E+12
LONGERON	113.1	1.56E+09	3.49E+16
ROW 6	98.1	1.55E+12	3.59E+19
LONGERON	83.1	4.48E+13	1.03E+21
ROW 7	68.1	1.32E+14	3.03E+21
LONGERON	53.1	2.12E+14	4.89E+21
ROW 8	38.1	2.78E+14	6.40E+21
LONGERON	23.1	3.25E+14	7.48E+21
ROW 9	8.1	3.49E+14	8.05E+21
LONGERON	7.0	3.50E+14	8.08E+21
ROW 10	21.9	3.27E+14	7.55E+21
LONGERON	36.9	2.82E+14	6.51E+21
ROW 11	51.9	2.18E+14	5.02E+21
LONGERON	66.9	1.38E+14	3.19E+21
ROW 12	81.9	5.12E+13	1.18E+21
LONGERON	96.9	2.28E+12	5.38E+19
SPACE END	89.2	1.71E+13	3.94E+20
EARTH END	-90.8	1.22E+13	2.82E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.53E+14	8.14E+21
SIDE DIR	90.0	1.45E+13	3.35E+20

AVERAGE ATOMIC OXYGEN DENSITY: 4.58E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 907.9 TO 1605.5 K
 ALTITUDE RANGE: 345.8 TO 357.0 KM

 *DATE: DECEMBER 30, 1989 DAY OF YEAR: 364 *
 *CUMULATIVE EXPOSURE TIME: 2093 DAYS *

AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.85E+09	6.97E+16
LONGERON	126.9	3.81E+05	7.45E+12
ROW 2	141.9	2.21E+01	4.70E+08
LONGERON	156.9	6.63E-03	1.42E+05
ROW 3	171.9	6.73E-05	1.31E+03
LONGERON	173.1	6.82E-05	1.12E+03
ROW 4	158.1	6.70E-03	9.21E+04
LONGERON	143.1	2.04E+01	2.52E+08
ROW 5	128.1	2.86E+05	3.64E+12
LONGERON	113.1	2.31E+09	3.63E+16
ROW 6	98.1	1.93E+12	3.71E+19
LONGERON	83.1	5.08E+13	1.06E+21
ROW 7	68.1	1.49E+14	3.12E+21
LONGERON	53.1	2.40E+14	5.03E+21
ROW 8	38.1	3.14E+14	6.59E+21
LONGERON	23.1	3.68E+14	7.71E+21
ROW 9	8.1	3.96E+14	8.29E+21
LONGERON	6.9	3.97E+14	8.32E+21
ROW 10	21.9	3.71E+14	7.77E+21
LONGERON	36.9	3.20E+14	6.70E+21
ROW 11	51.9	2.47E+14	5.17E+21
LONGERON	66.9	1.57E+14	3.29E+21
ROW 12	81.9	5.83E+13	1.22E+21
LONGERON	96.9	2.85E+12	5.56E+19
SPACE END	89.2	1.98E+13	4.06E+20
EARTH END	-90.8	1.43E+13	2.90E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	4.00E+14	8.38E+21
SIDE DIR	90.0	1.69E+13	3.45E+20

AVERAGE ATOMIC OXYGEN DENSITY: 5.19E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 978.6 TO 1642.5 K
 ALTITUDE RANGE: 339.6 TO 352.6 KM

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*DATE:    JANUARY    6, 1990          DAY OF YEAR:    6 *
*CUMULATIVE EXPOSURE TIME: 2100 DAYS *
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AVERAGES AND RANGES ARE BASED ON 1750 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	3.53E+09	7.18E+16
LONGERON	126.9	3.49E+05	7.66E+12
ROW 2	141.9	1.57E+01	4.80E+08
LONGERON	156.9	3.16E-03	1.44E+05
ROW 3	171.8	2.25E-05	1.32E+03
LONGERON	173.1	1.84E-05	1.13E+03
ROW 4	158.1	1.74E-03	9.32E+04
LONGERON	143.1	6.17E+00	2.56E+08
ROW 5	128.1	1.21E+05	3.72E+12
LONGERON	113.1	1.58E+09	3.73E+16
ROW 6	98.1	1.77E+12	3.82E+19
LONGERON	83.1	4.99E+13	1.09E+21
ROW 7	68.1	1.47E+14	3.21E+21
LONGERON	53.1	2.37E+14	5.17E+21
ROW 8	38.1	3.10E+14	6.78E+21
LONGERON	23.1	3.63E+14	7.93E+21
ROW 9	8.2	3.90E+14	8.53E+21
LONGERON	6.9	3.91E+14	8.55E+21
ROW 10	21.9	3.66E+14	7.99E+21
LONGERON	36.9	3.15E+14	6.89E+21
ROW 11	51.9	2.43E+14	5.32E+21
LONGERON	66.9	1.55E+14	3.38E+21
ROW 12	81.9	5.75E+13	1.25E+21
LONGERON	96.9	2.70E+12	5.72E+19
SPACE END	89.2	1.93E+13	4.18E+20
EARTH END	-90.8	1.38E+13	2.99E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.94E+14	8.62E+21
SIDE DIR	90.0	1.64E+13	3.55E+20

AVERAGE ATOMIC OXYGEN DENSITY: 5.11E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 900.6 TO 1622.6 K
 ALTITUDE RANGE: 334.8 TO 349.3 KM

 *DATE: JANUARY 12, 1990 DAY OF YEAR: 12 *
 *CUMULATIVE EXPOSURE TIME: 2106 DAYS *

AVERAGES AND RANGES ARE BASED ON 1478 POINTS ON ORBIT

LOCATION	AVERAGE INCIDENCE ANGLE (DEGREES)	AVERAGE FLUX (#/CM**2 SEC)	FLUENCE (#/CM**2)
ROW 1	111.9	2.12E+09	7.29E+16
LONGERON	126.9	1.33E+05	7.73E+12
ROW 2	141.9	3.03E+00	4.81E+08
LONGERON	156.9	2.80E-04	1.44E+05
ROW 3	171.9	1.03E-06	1.32E+03
LONGERON	173.1	6.33E-07	1.13E+03
ROW 4	158.1	7.52E-05	9.32E+04
LONGERON	143.1	5.25E-01	2.56E+08
ROW 5	128.1	2.53E+04	3.73E+12
LONGERON	113.1	7.73E+08	3.77E+16
ROW 6	98.1	1.45E+12	3.89E+19
LONGERON	83.1	4.66E+13	1.12E+21
ROW 7	68.1	1.38E+14	3.28E+21
LONGERON	53.1	2.22E+14	5.29E+21
ROW 8	38.1	2.91E+14	6.93E+21
LONGERON	23.1	3.40E+14	8.10E+21
ROW 9	8.1	3.66E+14	8.72E+21
LONGERON	6.9	3.67E+14	8.74E+21
ROW 10	21.9	3.43E+14	8.17E+21
LONGERON	36.9	2.96E+14	7.04E+21
ROW 11	51.9	2.28E+14	5.43E+21
LONGERON	66.9	1.45E+14	3.45E+21
ROW 12	81.9	5.36E+13	1.28E+21
LONGERON	96.9	2.24E+12	5.83E+19
SPACE END	89.2	1.75E+13	4.27E+20
EARTH END	-90.8	1.24E+13	3.05E+20

CONSTANT
INCIDENCE ANGLE
(DEGREES)

RAM DIR	0.0	3.70E+14	8.81E+21
SIDE DIR	90.0	1.48E+13	3.63E+20

AVERAGE ATOMIC OXYGEN DENSITY: 4.79E+08 ATOMS/CM**3
 TEMPERATURE RANGE: 875.2 TO 1484.3 K
 ALTITUDE RANGE: 329.6 TO 345.3 KM

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13. ABSTRACT (Maximum 200 words) Atomic oxygen exposures were determined analytically for rows, longerons, and end bays of the Long Duration Exposure Facility (LDEF). The calculations are based on an analytical model that accounts for the effects of thermal molecular velocity, atmospheric temperature, number density, spacecraft velocity, incidence angle, and atmospheric rotation on atomic oxygen flux. Results incorporate variations in solar activity, geomagnetic index, and orbital parameters occurring over the 6-year flight of the spacecraft. To facilitate use of the data, both detailed tabulations and summary charts for atomic oxygen fluences are presented.				
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